

606887  
AD

U. S. A R M Y

TRANSPORTATION RESEARCH COMMAND

FORT EUSTIS, VIRGINIA

SUPPLEMENT  
to  
TRECOM TECHNICAL REPORT 64-3

CRASH INJURY EVALUATION  
PERSONNEL RESTRAINT SYSTEM STUDY  
CV-2 DeHAVILLAND CARIBOU

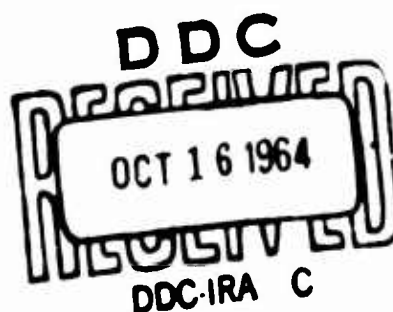
Contract DA 44-177-AMC-888(T)

April 1964

prepared by:

AVIATION SAFETY ENGINEERING AND RESEARCH  
Phoenix, Arizona

A Division Of  
Flight Safety Foundation, Inc.  
New York, New York



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**Task 1A024701A12101  
Contract DA 44-177-AMC-888(T)  
TRECOM Technical Report 64-3**

**April 1964**

**SUPPLEMENT  
to  
PERSONNEL RESTRAINT SYSTEM STUDY,  
CV-2 DeHAVILLAND CARIBOU**

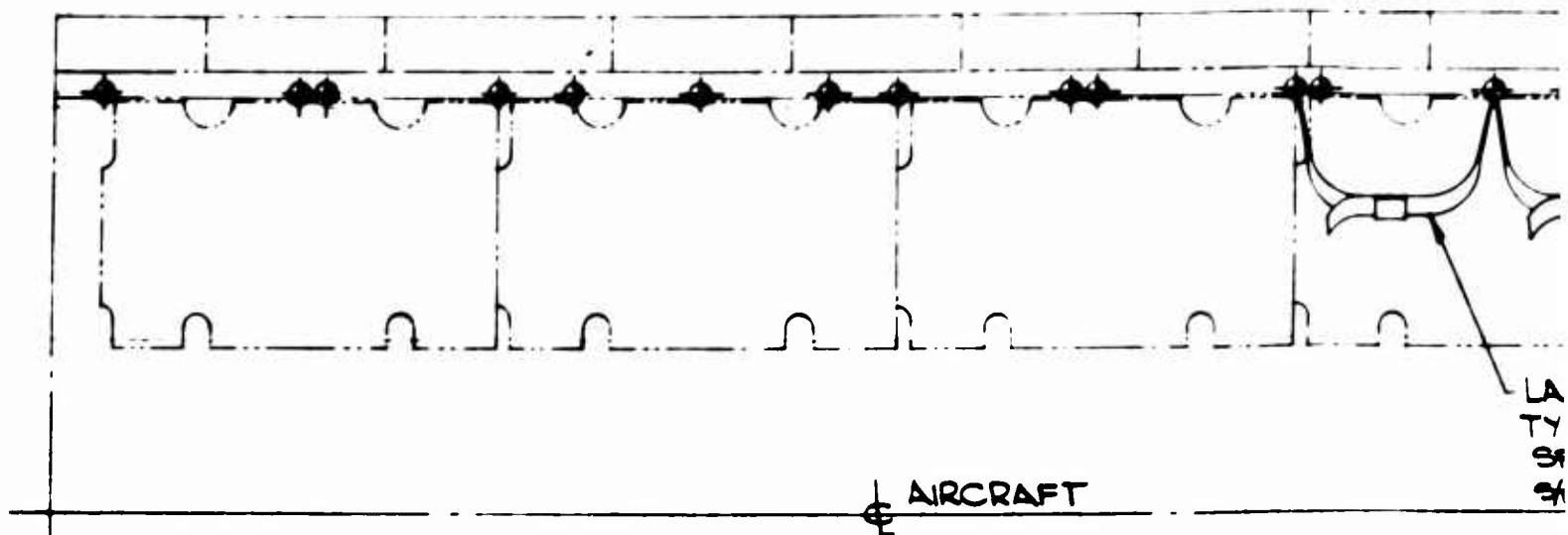
**Crash Injury Evaluation  
AvCIR 62-16**

**Prepared by  
Aviation Safety Engineering and Research  
2871 Sky Harbor Blvd.  
Phoenix, Arizona  
A Division of  
Flight Safety Foundation, Inc.**

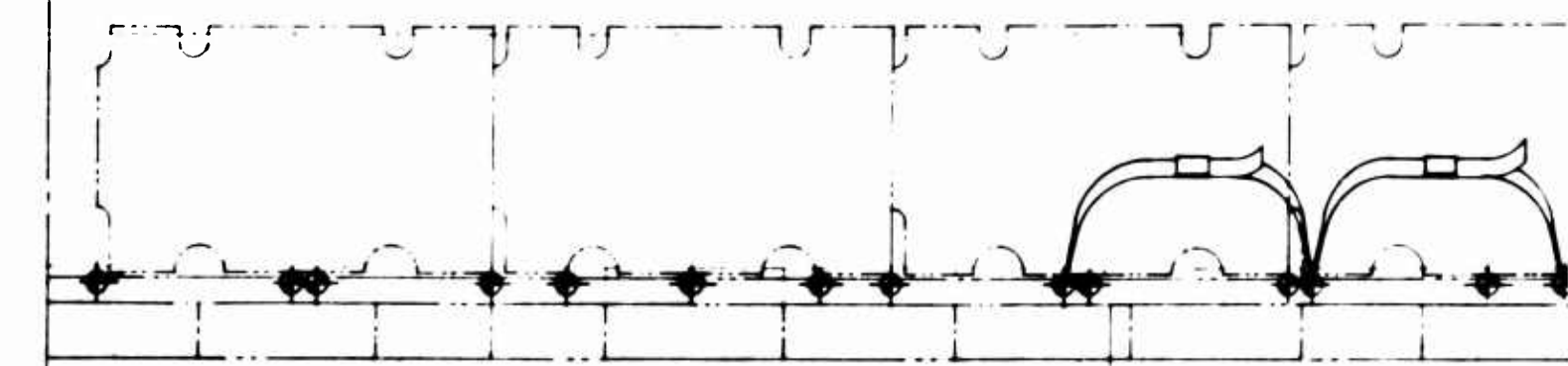
**for  
U. S. ARMY TRANSPORTATION RESEARCH COMMAND  
FORT EUSTIS, VIRGINIA**

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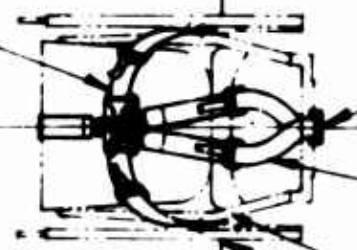
FORWARD



STA 93

STA 200

LAP BELT (REF)  
TYPE MD-1  
PART NO 54H19651

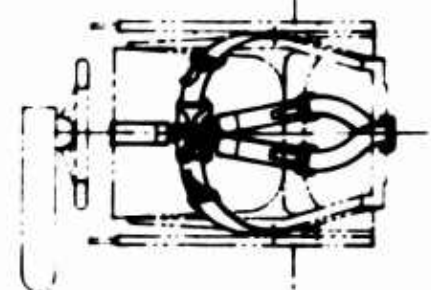


MODIFICATION-  
PILOTS SEAT-AC-1  
DETAILS AND SUB-  
AC-1-11 SHOULDER  
AC-1-12 GUIDE RO  
AC-1-13 TIE DOWN  
AC-1-14 SLIDE - F  
AC-1-16 SIDE TIE

SHOULDER HARNESS  
TYPE MB-2A  
PART NO 57D677

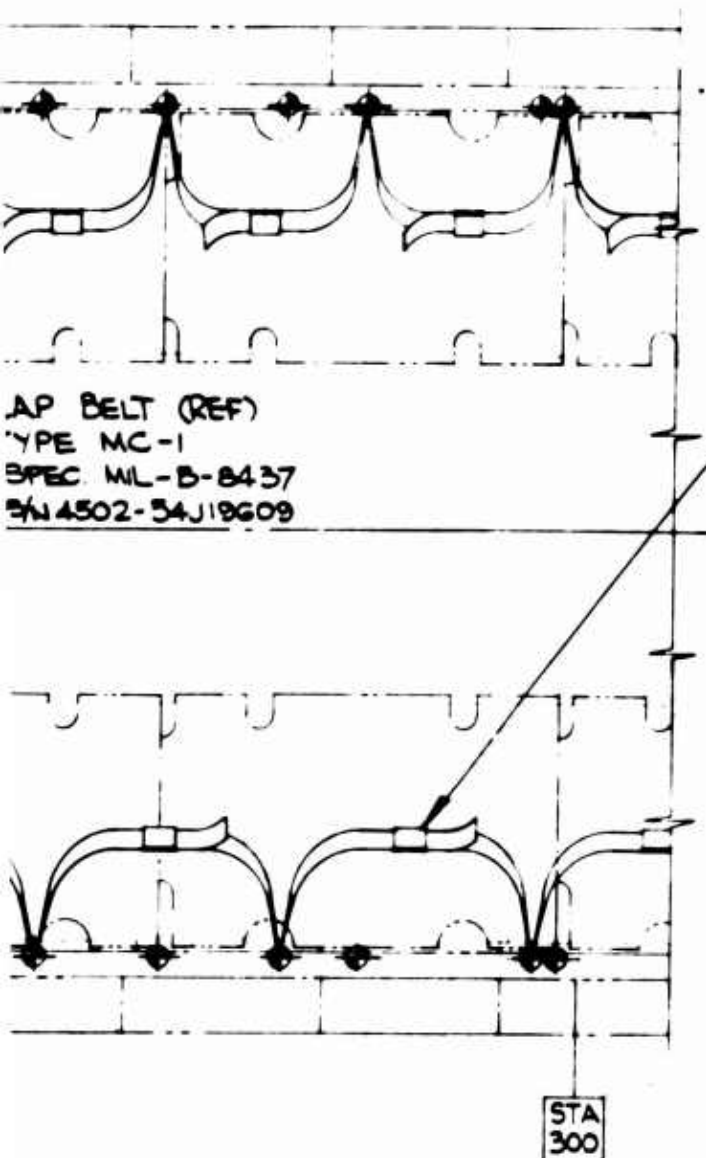
AC-1-18, REINFORCEMEN  
AC-1-17, REINFORCEMEN  
COCKPIT FLOOR A

AIRCRAFT



STA 0

STA 93



LAP BELT (REF)  
TYPE MC-1  
SPEC. MIL-B-8437  
SN 4502-54J19609

MODIFICATION - LAP BELT ATTACHMENT  
TROOP SEATS AC-1-22  
DETAILS AND SUB-ASSEMBLES REF:-  
AC-1-20 STRAP  
AC-1-21 RING BOLT  
AC-1-24 DETAILS

-1-15  
SUB-ASSEMBLIES REF-  
R STRAP GUIDE  
MOD ASSEMBLY  
N STRAP INSTALL. (ALT. #1)  
PILOT SEAT  
DOWN STRAPS INSTALL. (ALT. #2)

SS (REF)

ENT, DIAG BRACE, CREW SEAT  
MENT,  
AT STA. 60 BLKD

1. REFERENCE DRAWINGS (DEHAVILLAND) -  
CAF1038, CAF1035, CAF1036 PILOTS SEAT  
C4B1875 TROOP SEAT INSTALL.  
C4B1450 RAIL INSTALL (TROOP COMPT)  
C4B1170 BLKD STA 60  
NOTE:-

#30(.128) DIA. DRILL  
RADIUS PLATE AND TUBE  
LOCATE AT ASSEM.  
4 PLACES  
AN530C8-8 SCREW

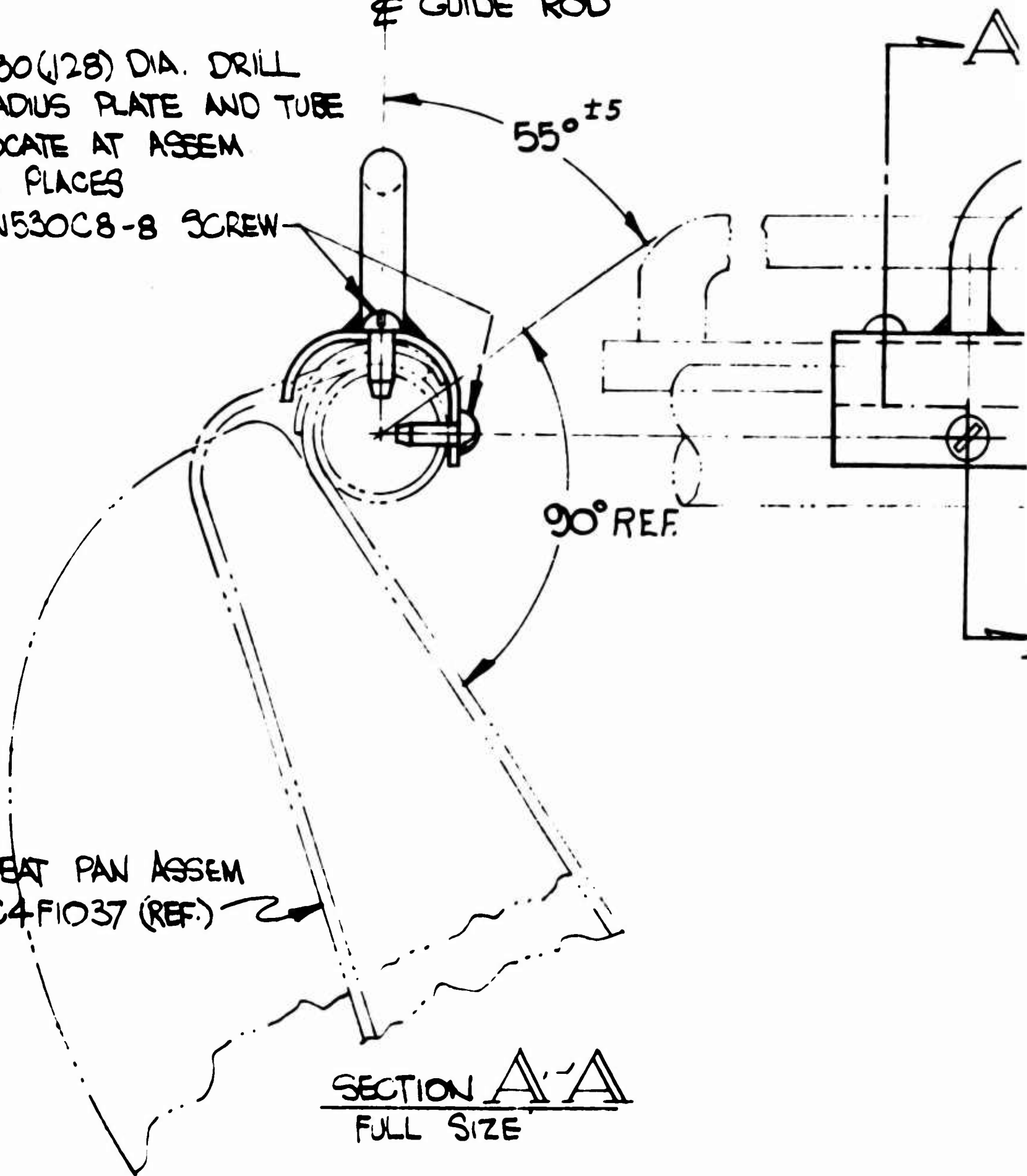
Ø GUIDE ROD

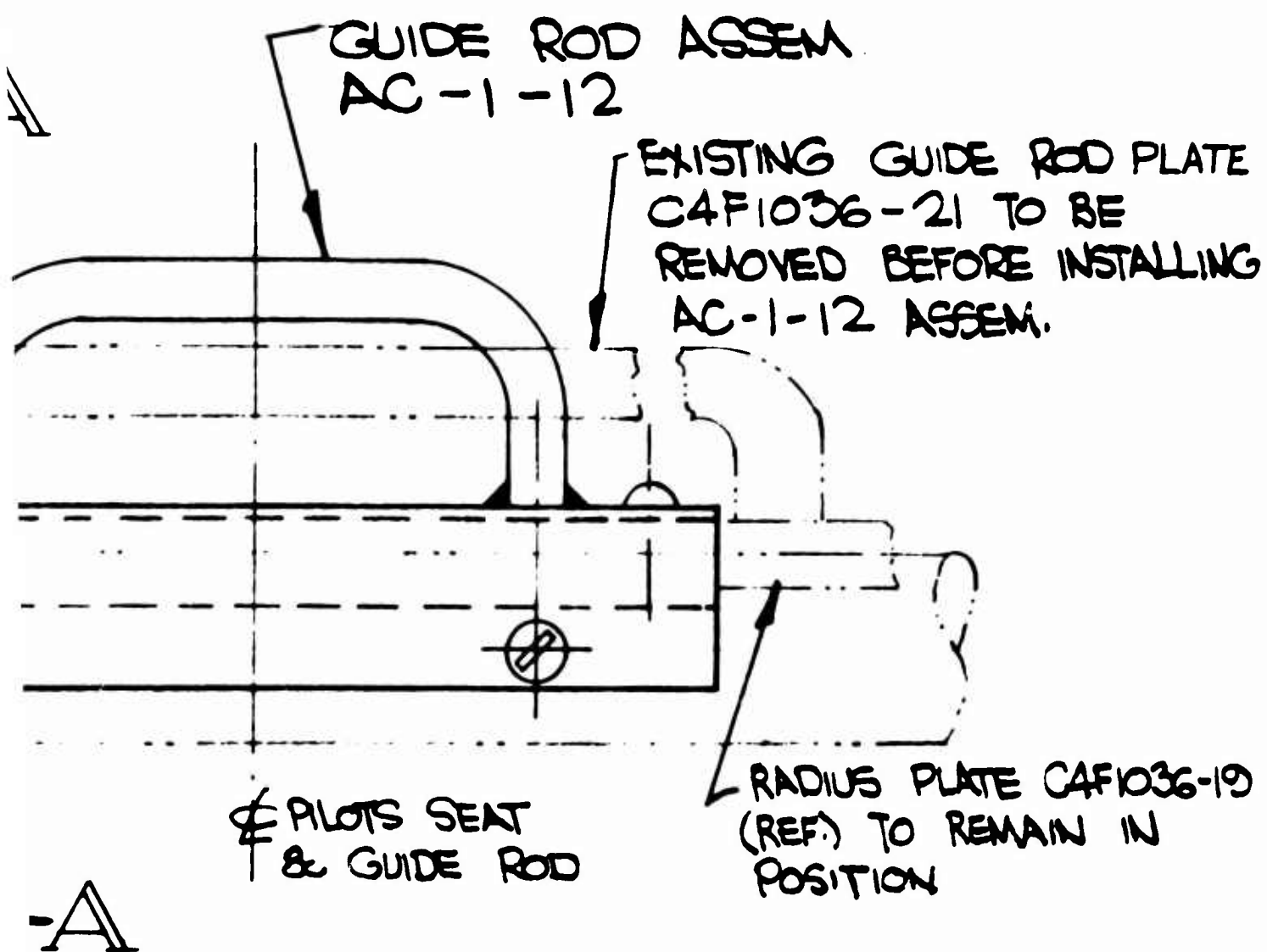
$55^{\circ} \pm 5$

$90^{\circ}$  REF

SEAT PAN ASSEM  
C4F1037 (REF.)

SECTION A-A  
FULL SIZE

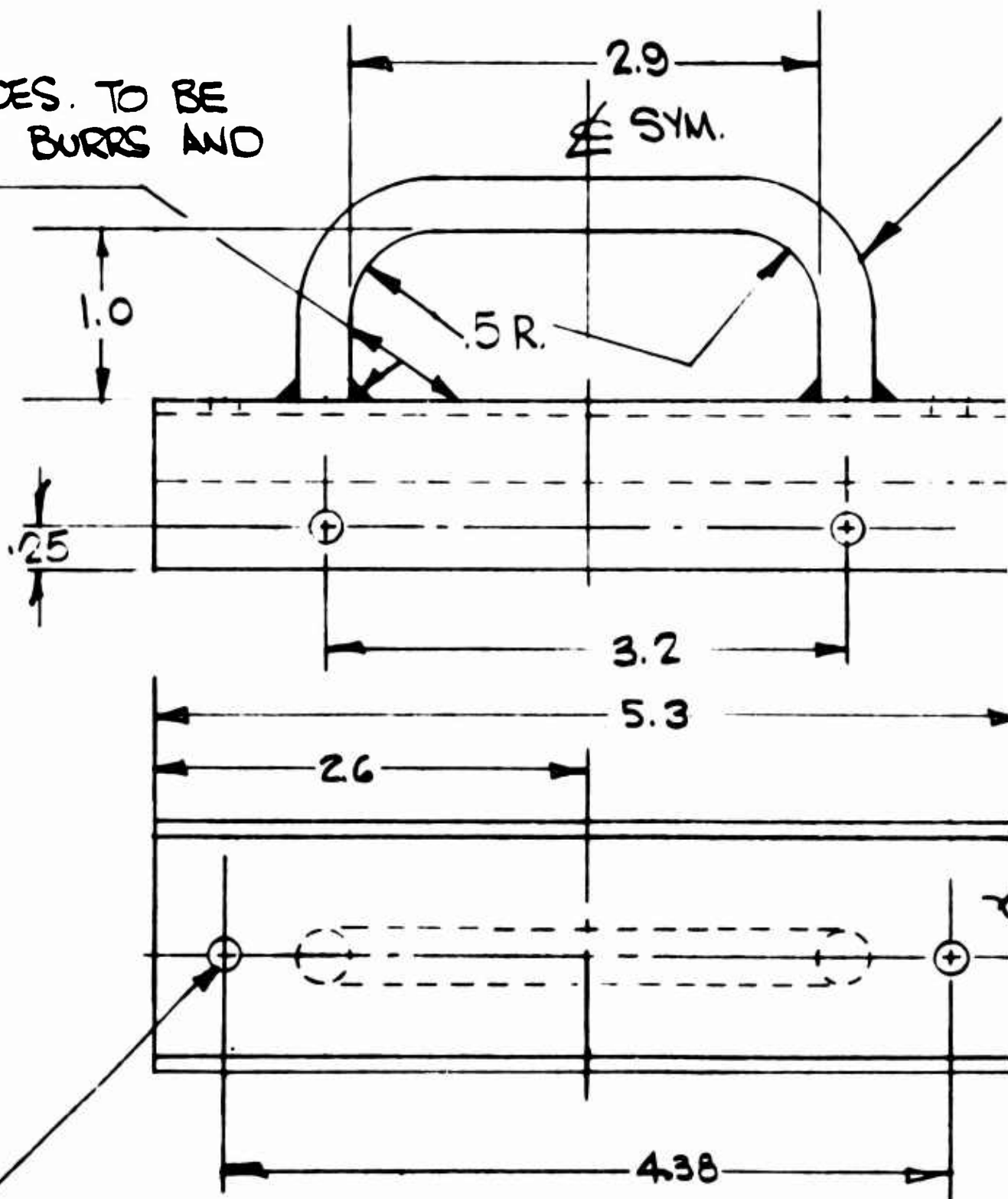


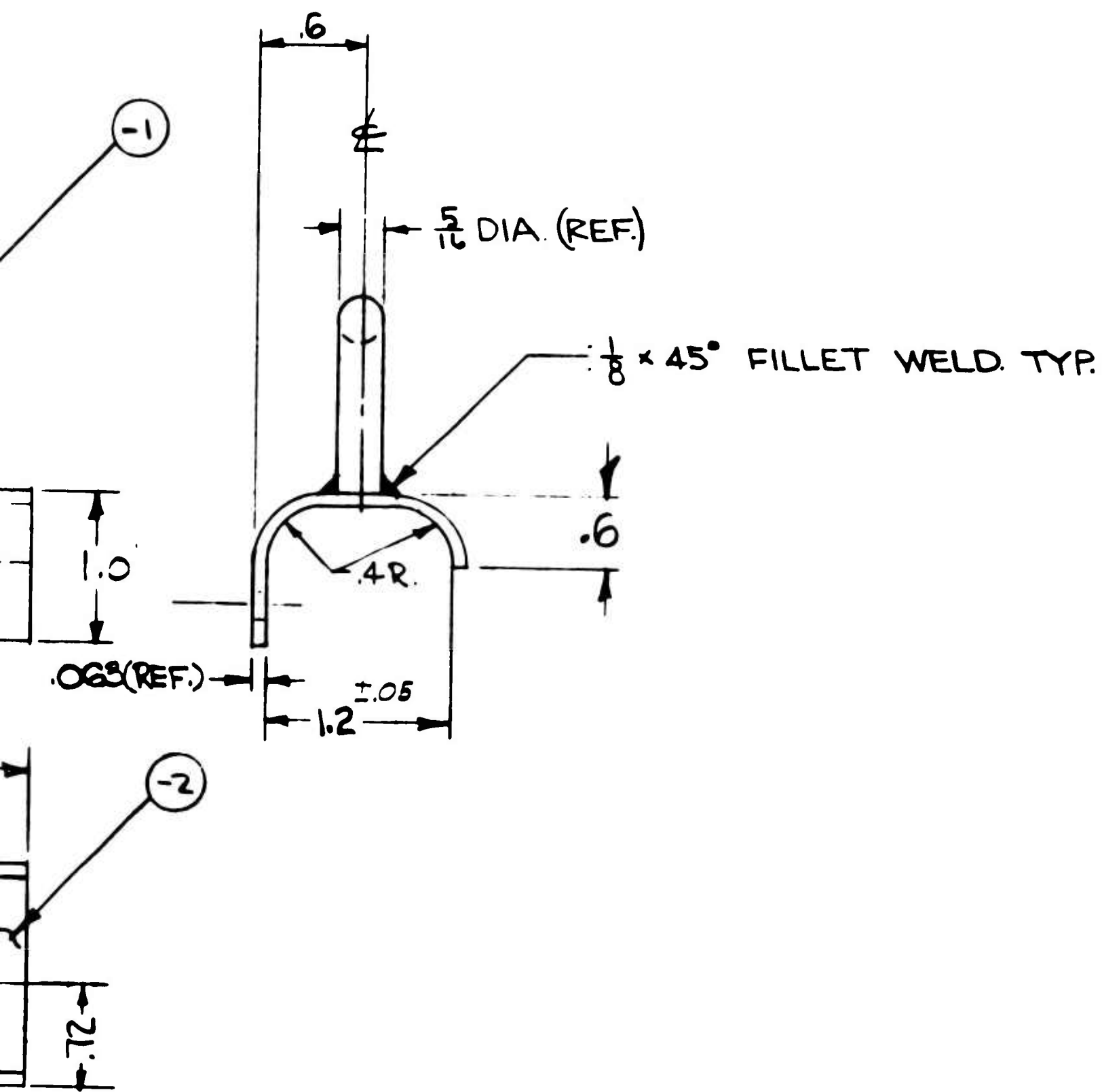




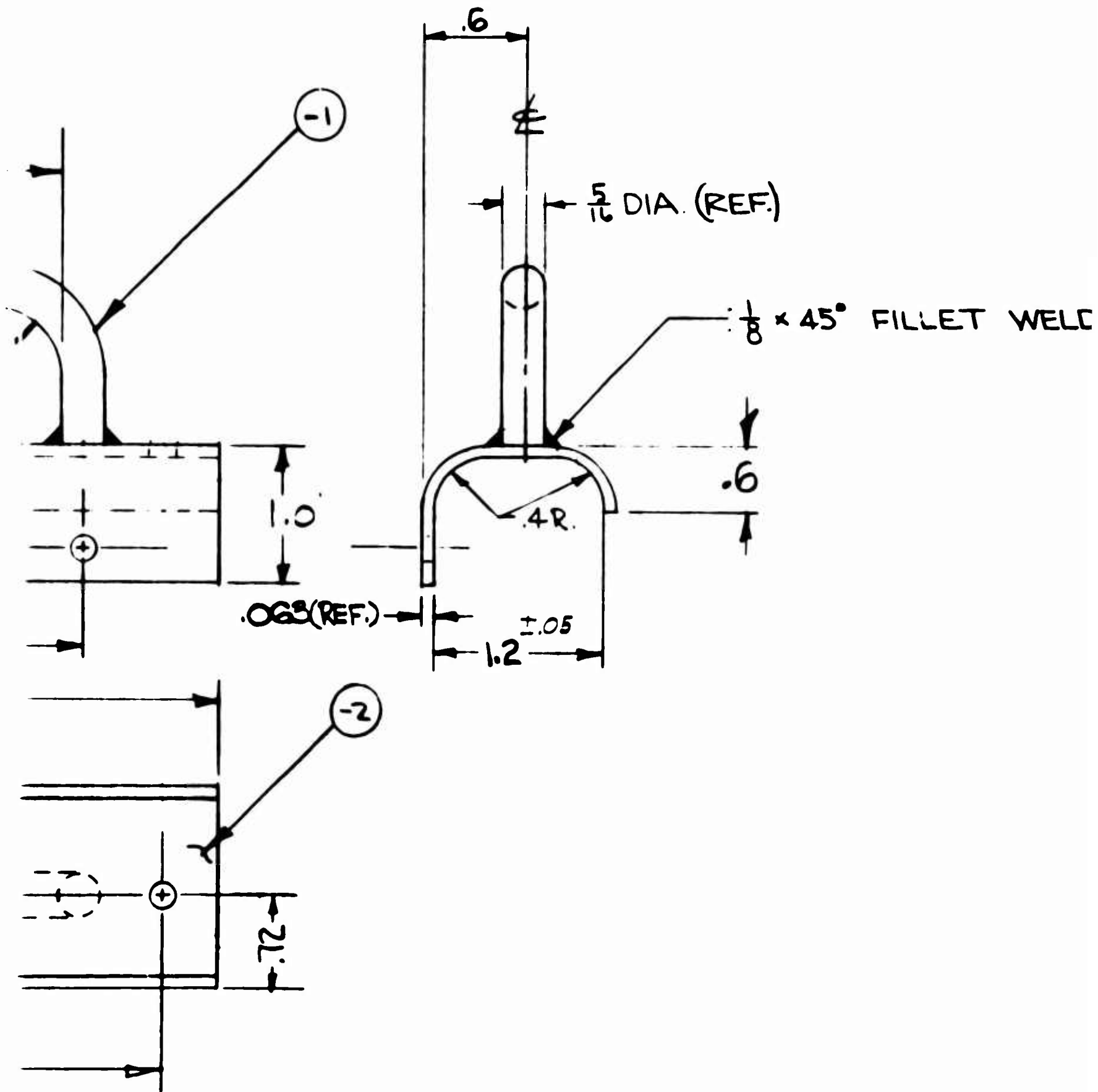
A

THESE SURFACES. TO BE  
FREE OF ALL BURRS AND  
SLAG.





B

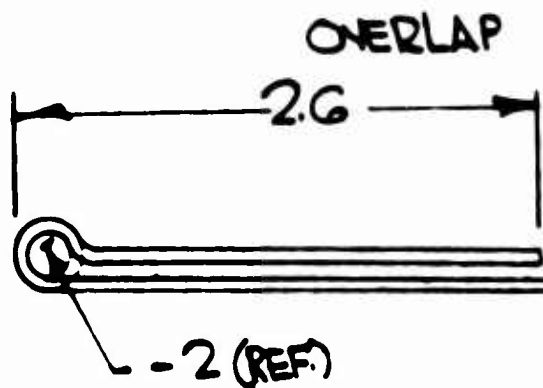


~ NOTES ~

1. AFTER -1 & -2 ARE FORMED WELD THE PIECES TOGETHER & HEAT TREAT TO THE T6 CONDITION.
2. AFTER HEAT TREATING DIP ASSEMBLY IN ZINC CHROMATE PRIMER. THE PRIMER IS TO BE IN ACCORDANCE WITH SPEC. MIL-P-6889.
3. IF 3/16 TUBE IS NOT AVAILABLE, 3/8 x .046 MAY BE USED

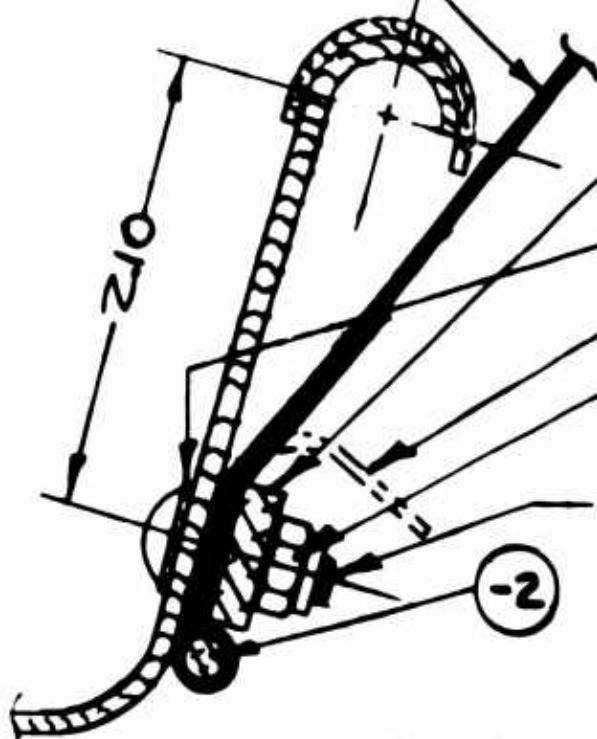
D. TYP.

A



DETAIL B

STRAP IS TO  
COME OVER FORWARD  
EDGE OF CUSHION.



AVCIR-15 TIE BAR

(-1) BRACKET SEE SHEET #2

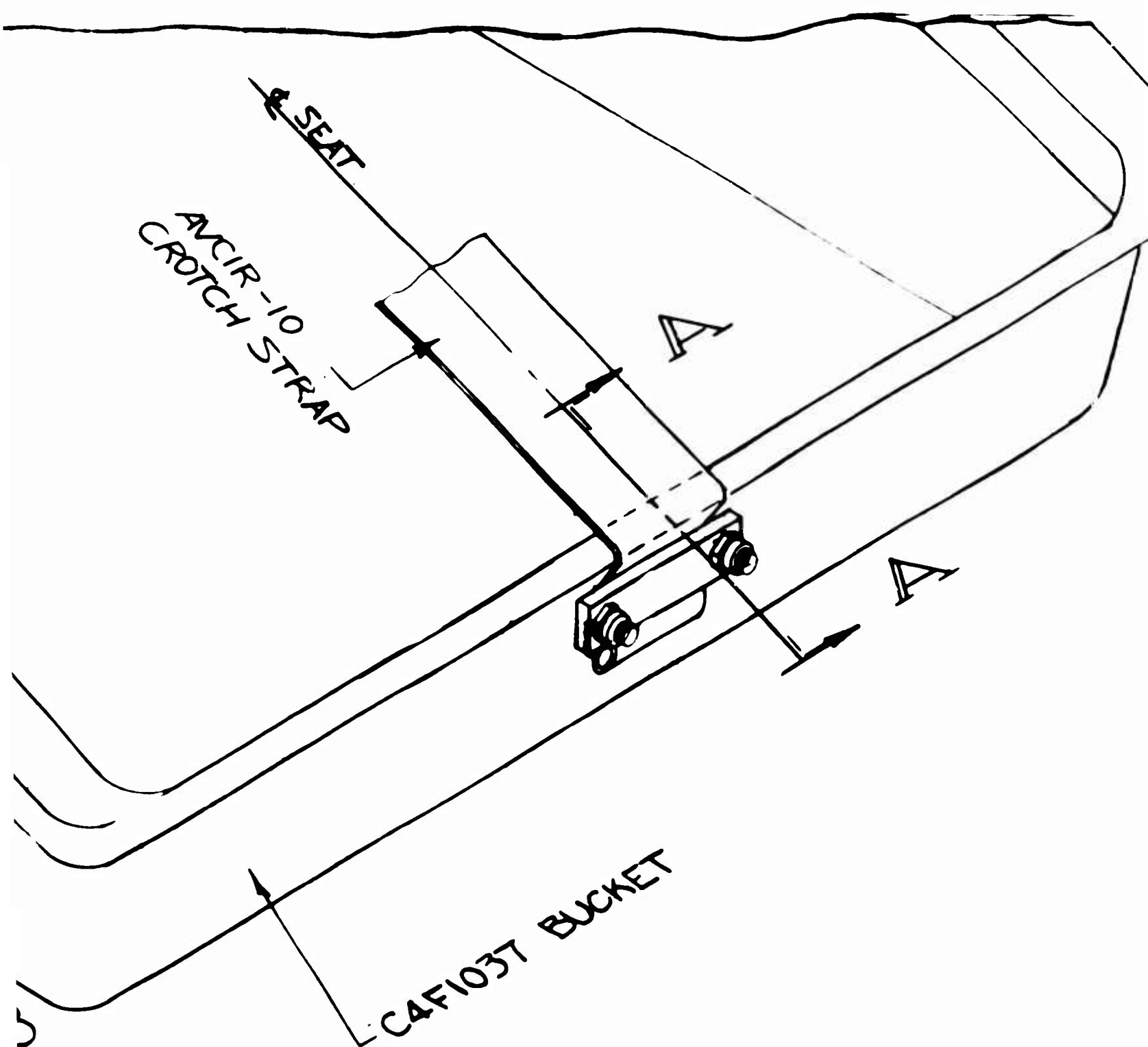
EXCESS WEBBING-SEE DETAIL B

AN365C-3 NUT

CLEVIS BOLT AN23-11A

1. CEMENT  
CLAMPIN
2. THIS TIE  
TYPICAL

SECTION A-A  
FULL SIZE



### ~ NOTES ~

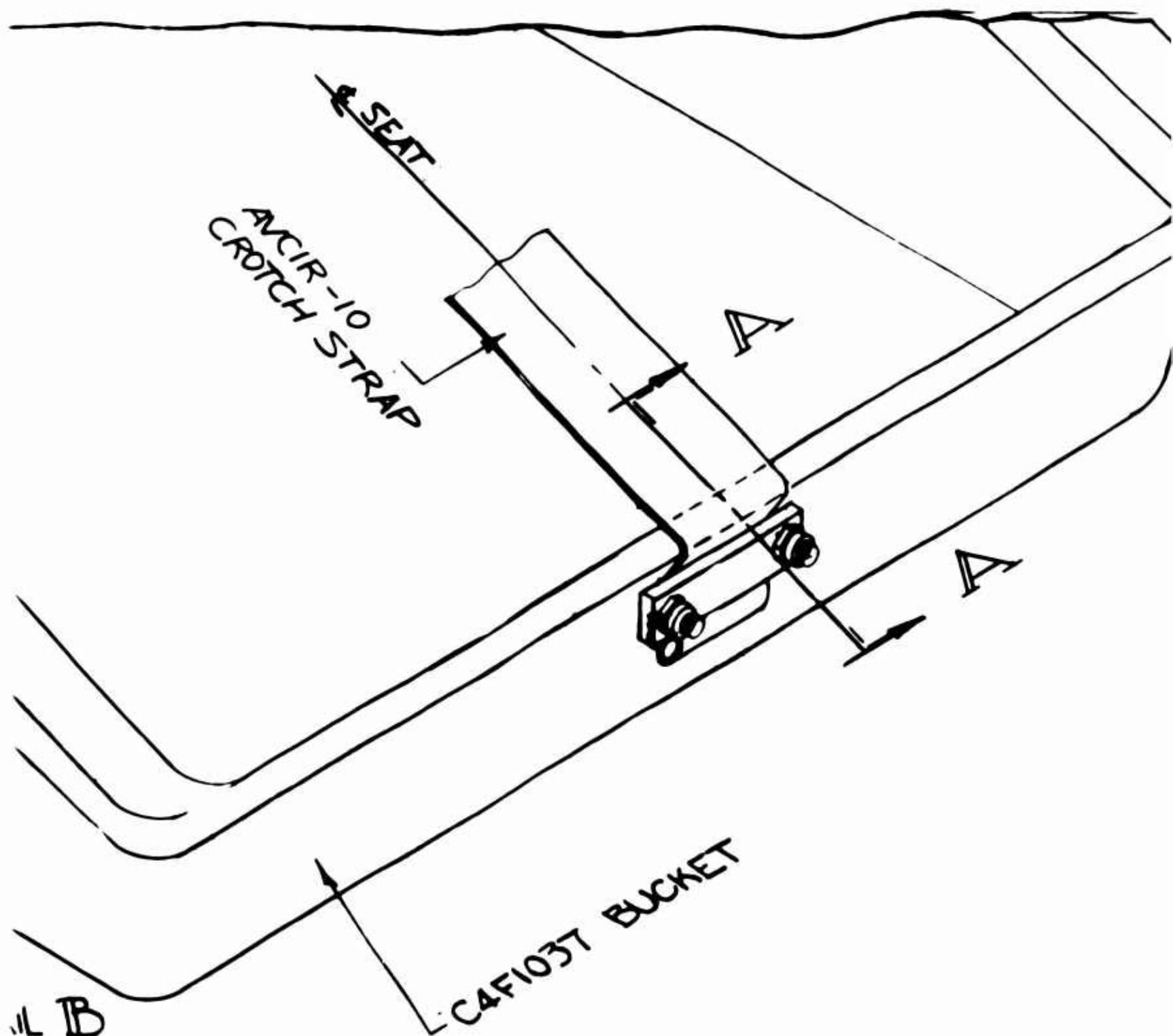
DETAIL-2 TO WEBBING BEFORE  
 ING. USE HOUSEHOLD CEMENT.  
 E DOWN STRAP INSTALLATION IS  
 L FOR BOTH PILOT & CO-PILOT SEAT.

B

CR

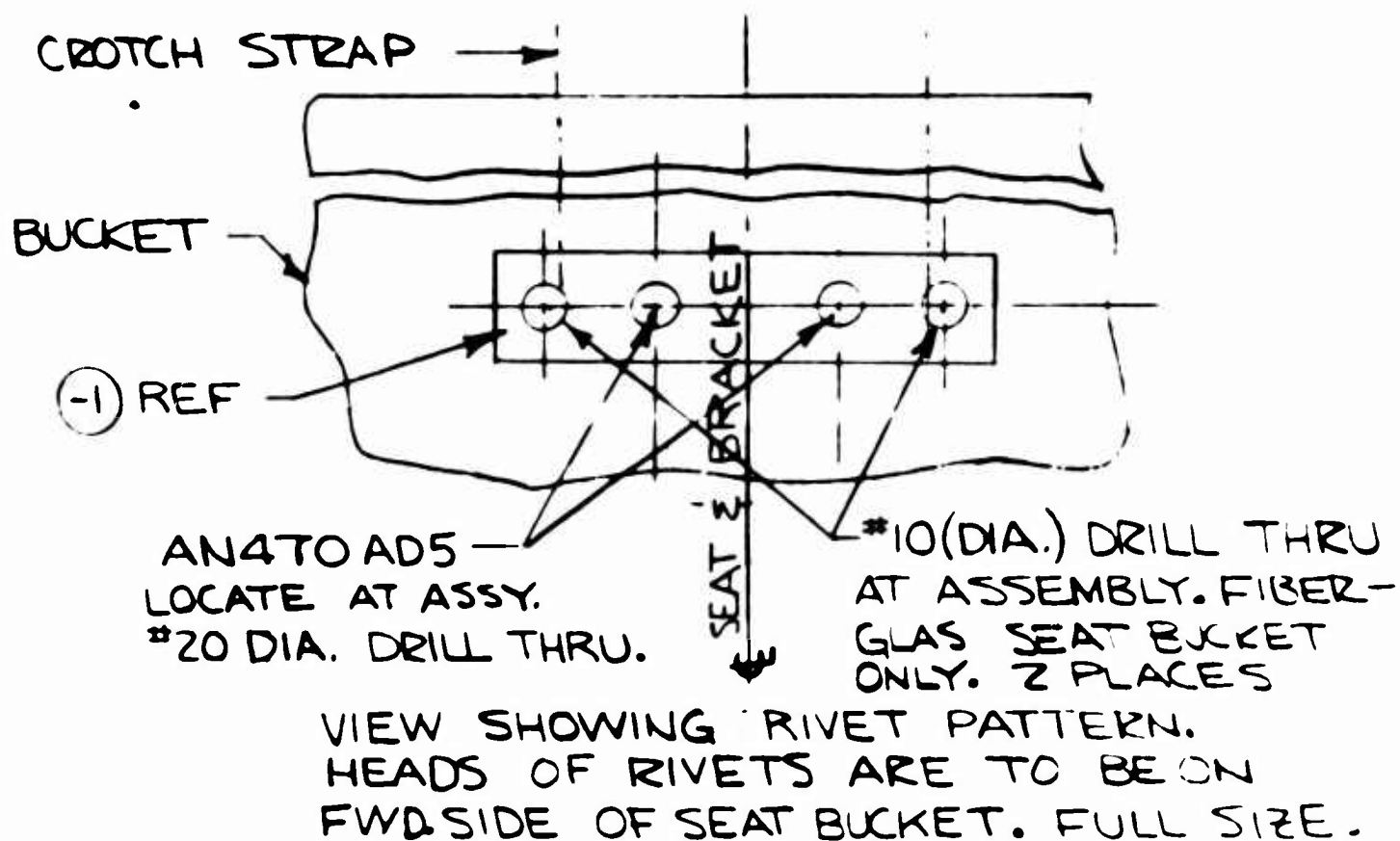
BUC

(-1)

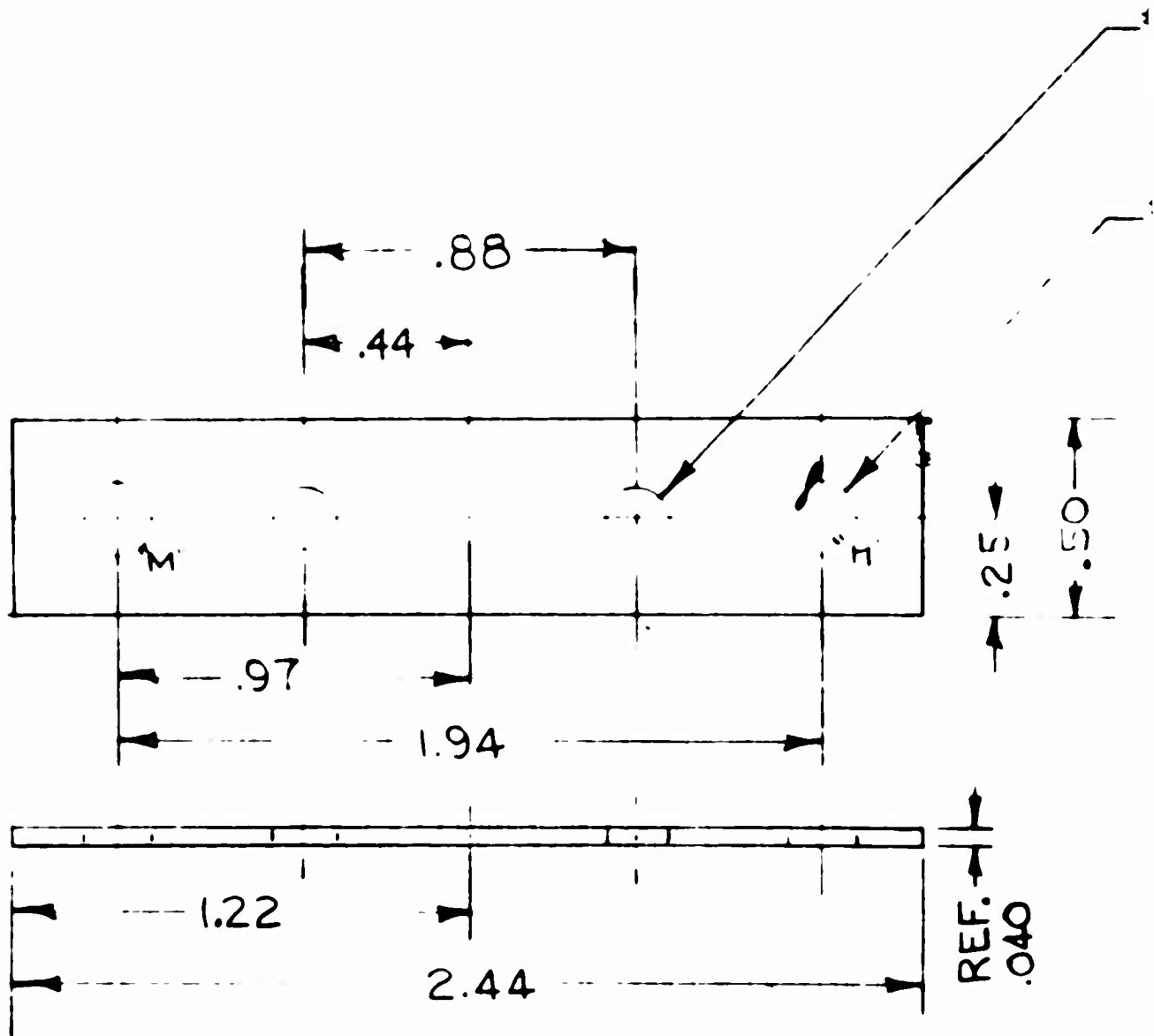


~ NOTES ~

MENT DETAIL-2 TO WEBBING BEFORE  
AMPING. USE HOUSEHOLD CEMENT.  
S TIE DOWN STRAP INSTALLATION IS  
PICAL FOR BOTH PILOT & CO-PILOT SEAT.





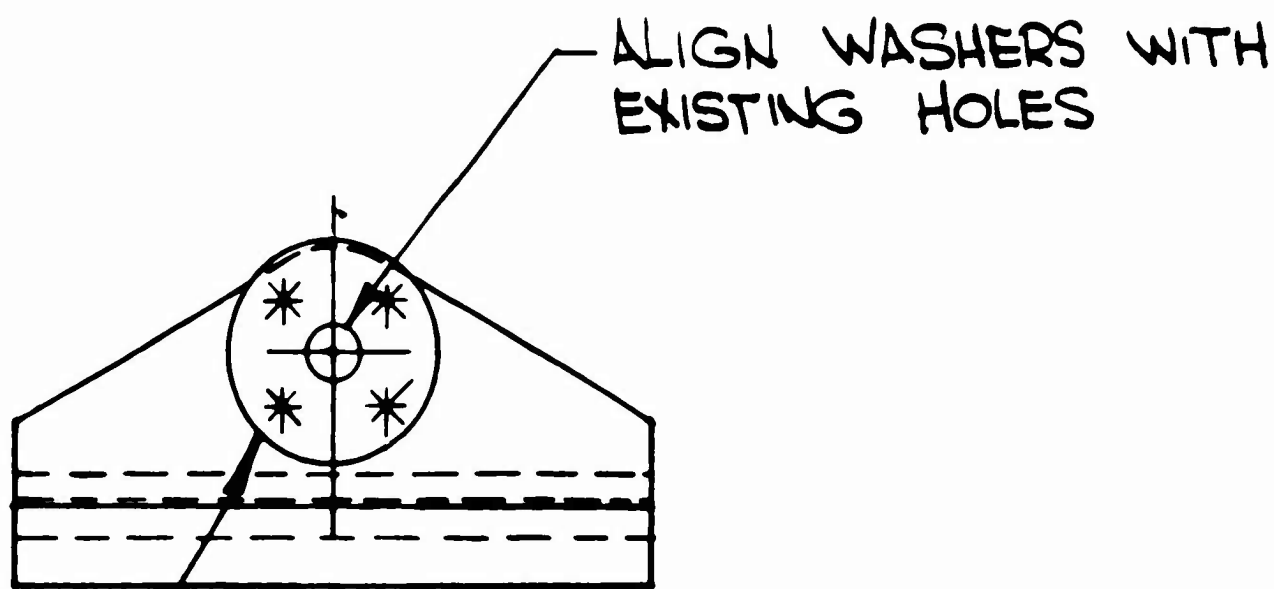


DETAIL (1)

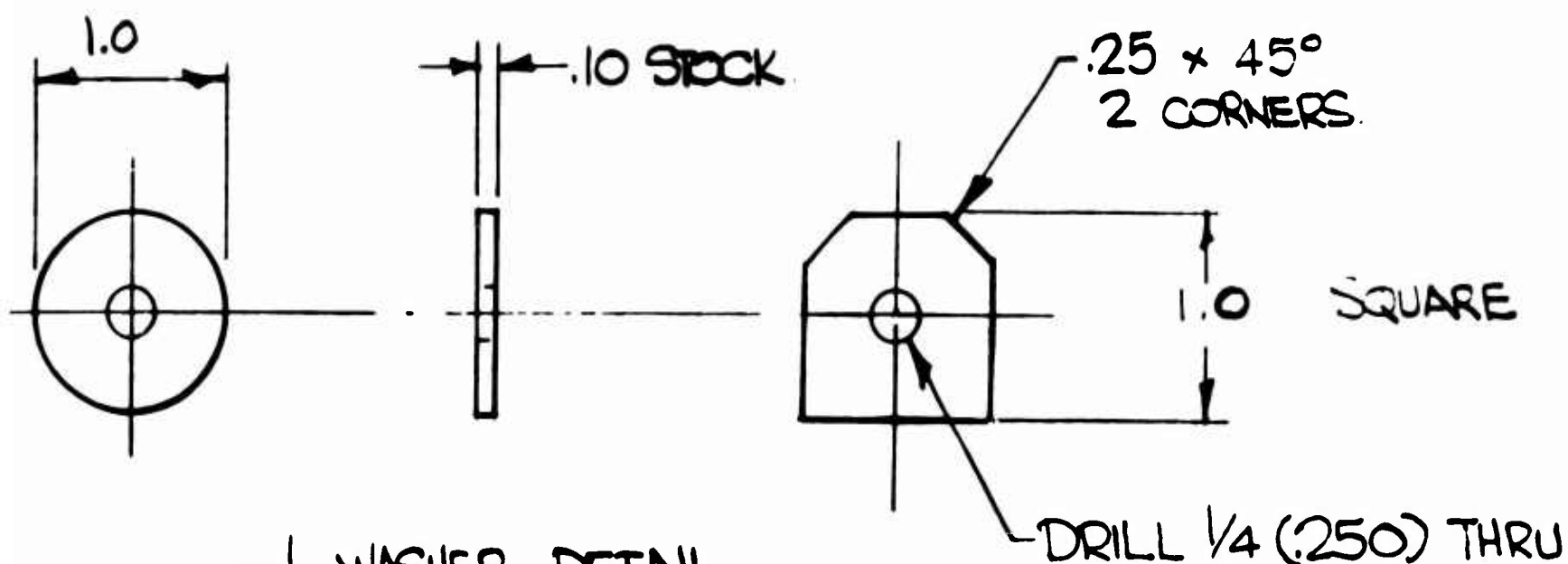
-#19 DIA. DRILL THRU. 2 PLACES

-#10 DIA. DRILL THRU. 2 PLACES MARKED "M".

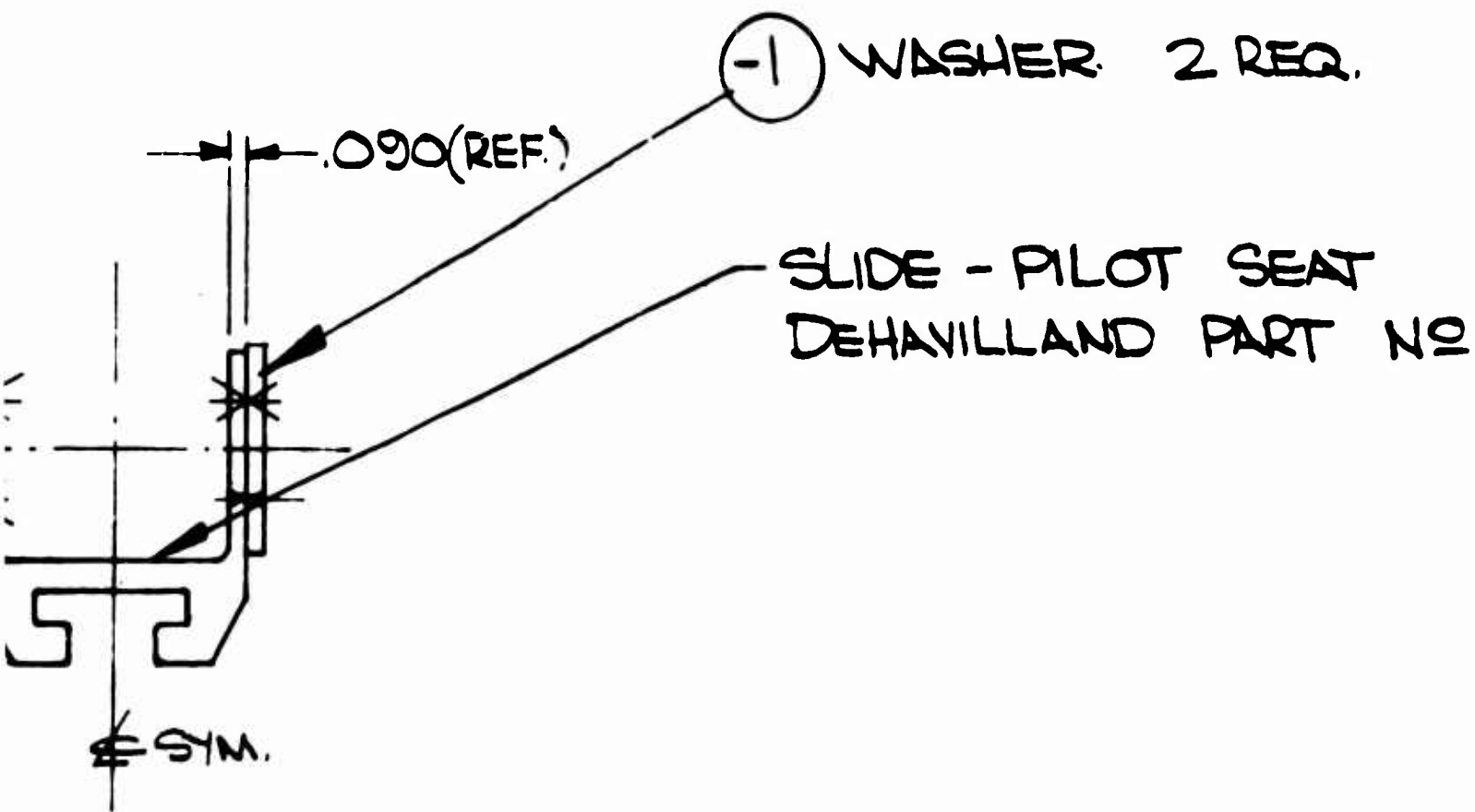
A



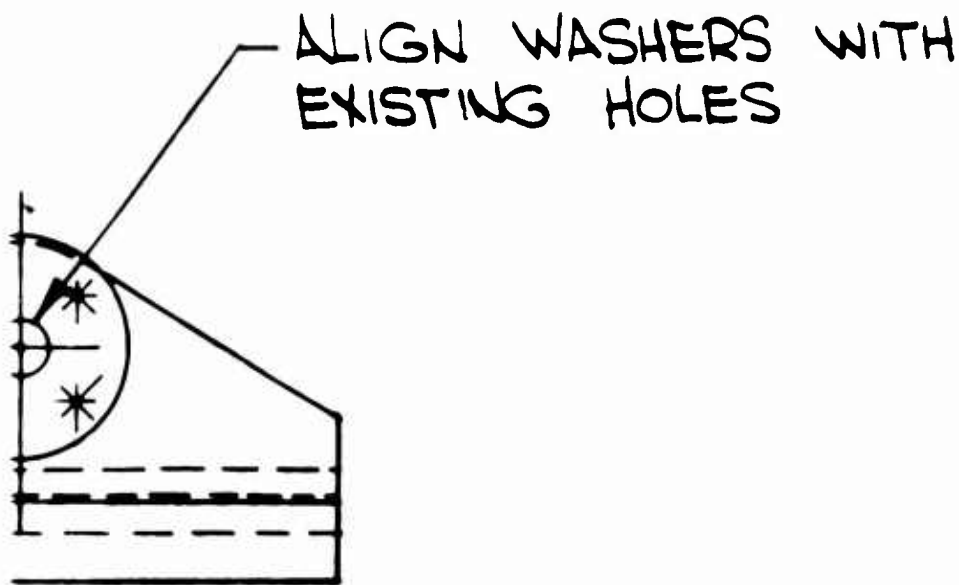
SPOT WELD (HI-FREQUENCY)  
- 1 WASHER TO SLIDE  
4 PLACES AS SHOWN.



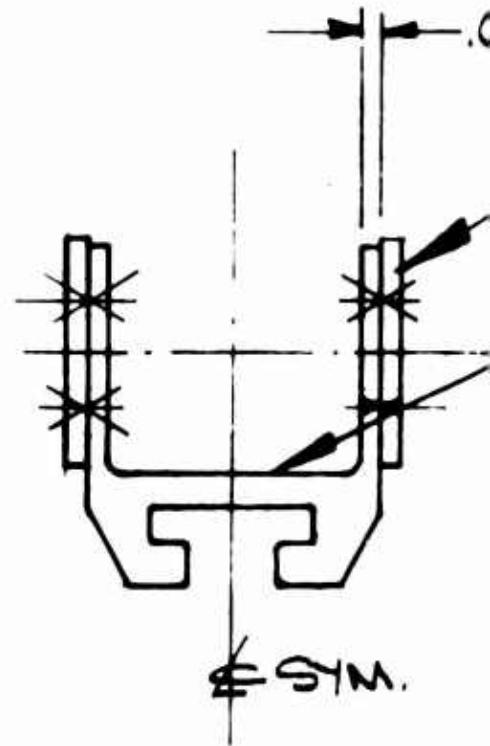
- 1 WASHER DETAIL  
OPTIONAL CONSTRUCTION



**B**

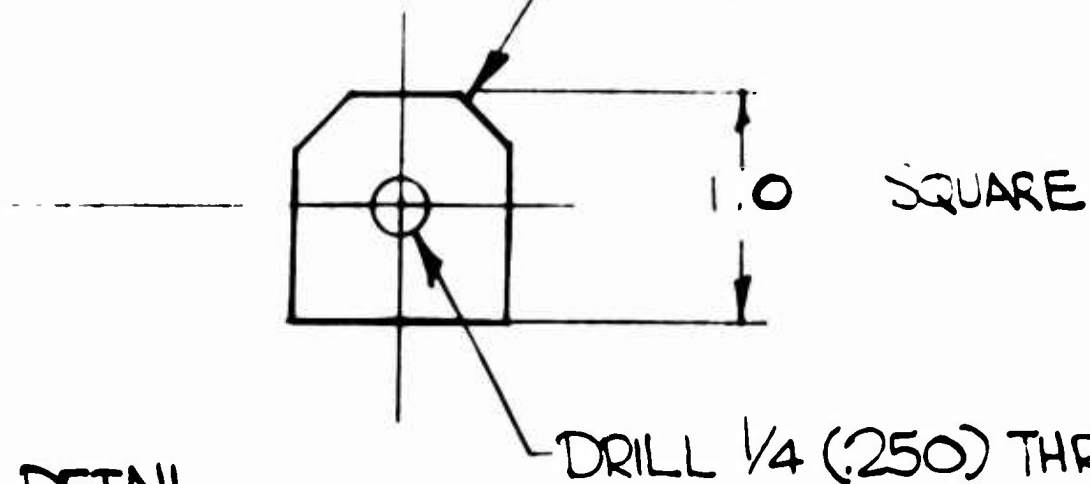


WELD (HI-FREQUENCY)  
PER TO SLIDE  
ACES AS SHOWN



-.10 STOCK

.25 x 45°  
2 CORNERS



DETAIL  
CONSTRUCTION

.090(REF.)

① WASHER. 2 REQ.

SLIDE - PILOT SEAT  
DEHAVILLAND PART NO. C4FM1052

A

SEAT ASSEMBLY - PILOTS  
DEHAY LAND DWS NO CAF1058

TIE DOWN STRAP  
ALTERNATE #1  
AC-1-13

GUIDE ROD ASSEM  
AC-1-11

GUSSET (REF)  
CAF 035-29

GUSSET (REF)  
CAF1035-31

MODIFICATION A  
SEE DETAIL

SIDE TIE DOWN STRAPS  
ALTERNATE #2  
AC-1-16

MODIFICATION B  
SEE DETAIL

MODIFICATION - SIDE  
AC-1-14

SEAT TUBE  
CAF 035-8 (REF)

SEAT TUBE  
CAF1035-9 (REF)

GUSSET (REF)

MODIFICATION C

MODIFICATION G  
SEE SHEET #2

EXISTING AN502 BOLT  
AND SLEEVE NUT (REF)

SLIDE (REF)  
CAF1035-15

25 (TYP 2 PLCS)

STOP LUG (REF)

CUT BACK OF  
TRACK SLIDE  
THIS DISTANCE

SEAT TUBE  
CAF1035-19 (REF)

DRILL #11 (101) DIA  
AN3-14A BOLT  
NAS1022-N3 NUT  
4 REQ PER SEAT

# MODIFICATION DETAIL B

## FULL SIZE

AL-1-18(REF.)

SEAT TUBE  
CAF 035-3 (REF)

REPLACE EXISTING CHERRY RIVETS  
DRILL #11 (.9") DIA  
AN3-14A BOLT  
NAS 022-N3 NUT  
4 EA REQ PER SEAT

SEAT TUBE REF  
CAF 035-1

C4-F-1097(REF.)



EXISTING SPACER  
PART NO CAF 058-1 (REF)

BOLT NAS 462-4-28F  
NUT NAS 070-44  
4 REQ PER AL

SIZE AL - 4 REF

SECTION E-E  
FULL SIZE

(-2) SPACER

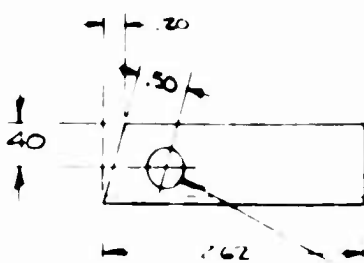
(-1) CHANNEL

SEAT TUBE  
CAF 035-17

SEAT TUBE (REF)  
CAF 035-17

MODIFICATION DE  
FULL SIZE

ON D-D  
SIZE



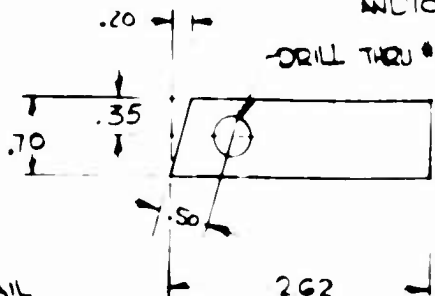
CUT BACK CHANNEL  
TO DIMENSION SHOWN

DRILL THRU  
#11 (.9") DIA

OF  
EXTRUSION  
CE

CHANNEL DETAIL  
TAKE FROM STANDARD SECTION  
AND 10157-0710 W/ 2024-T4

DRILL THRU #11 (.9") DIA



SPACER DETAIL

- NET WEIGHT WITH ALTERNATE #1 2.25 - 24 = 2.01 LBS
- NET WEIGHT WITH ALTERNATE #2 2.10 - 24 = 1.86 LBS
- THESE PARTS REPLACE EXISTING PARTS NO WEIGHT ADDITION
- TOTAL EXISTING WEIGHT REMOVED

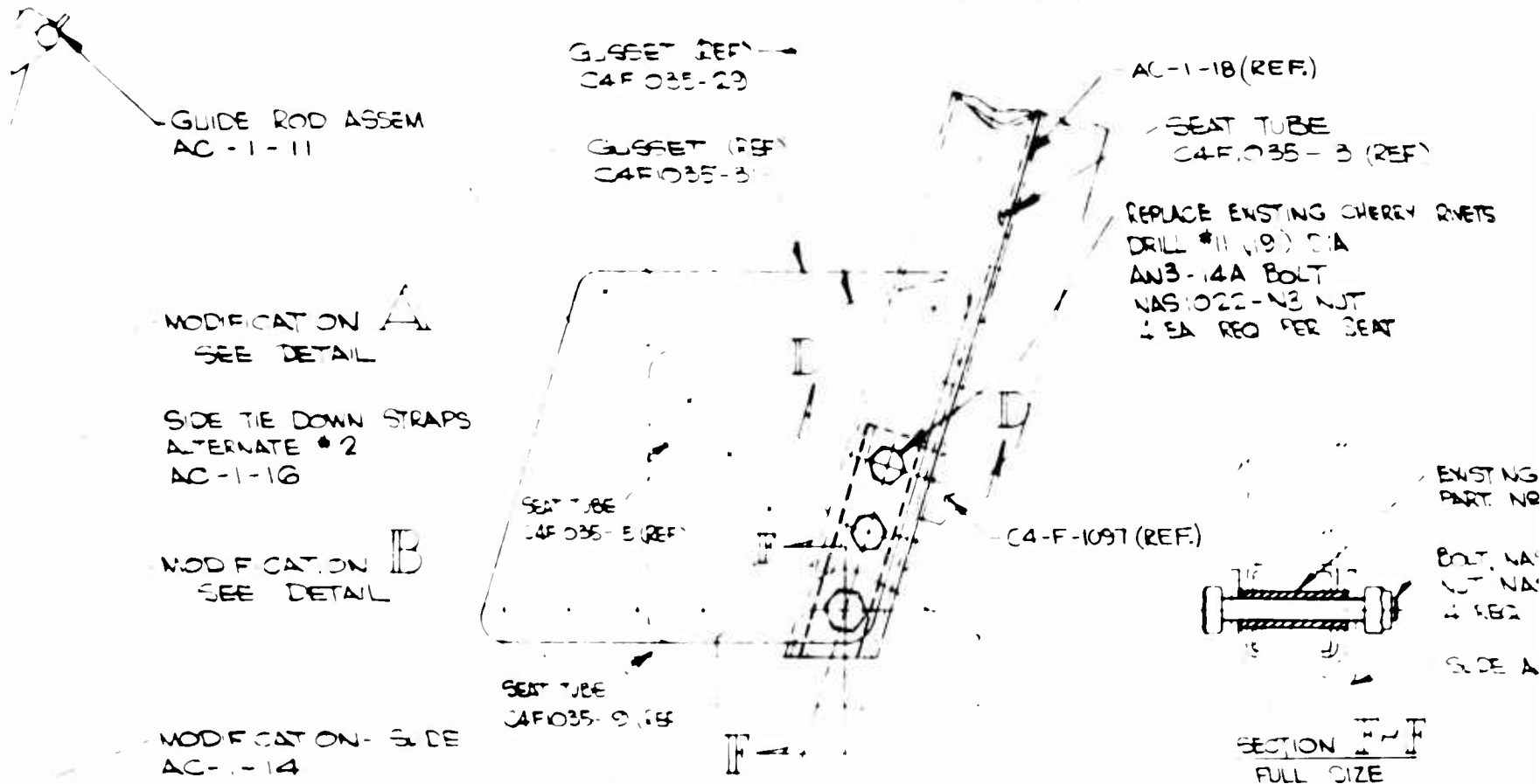
PART NO CAF 035-41 PLATE 3 (.085" x 4) = .34  
CAF 035-21 PLATE (HARDNESS 60) = .052 = .39 TOTAL 2.24

NOTES

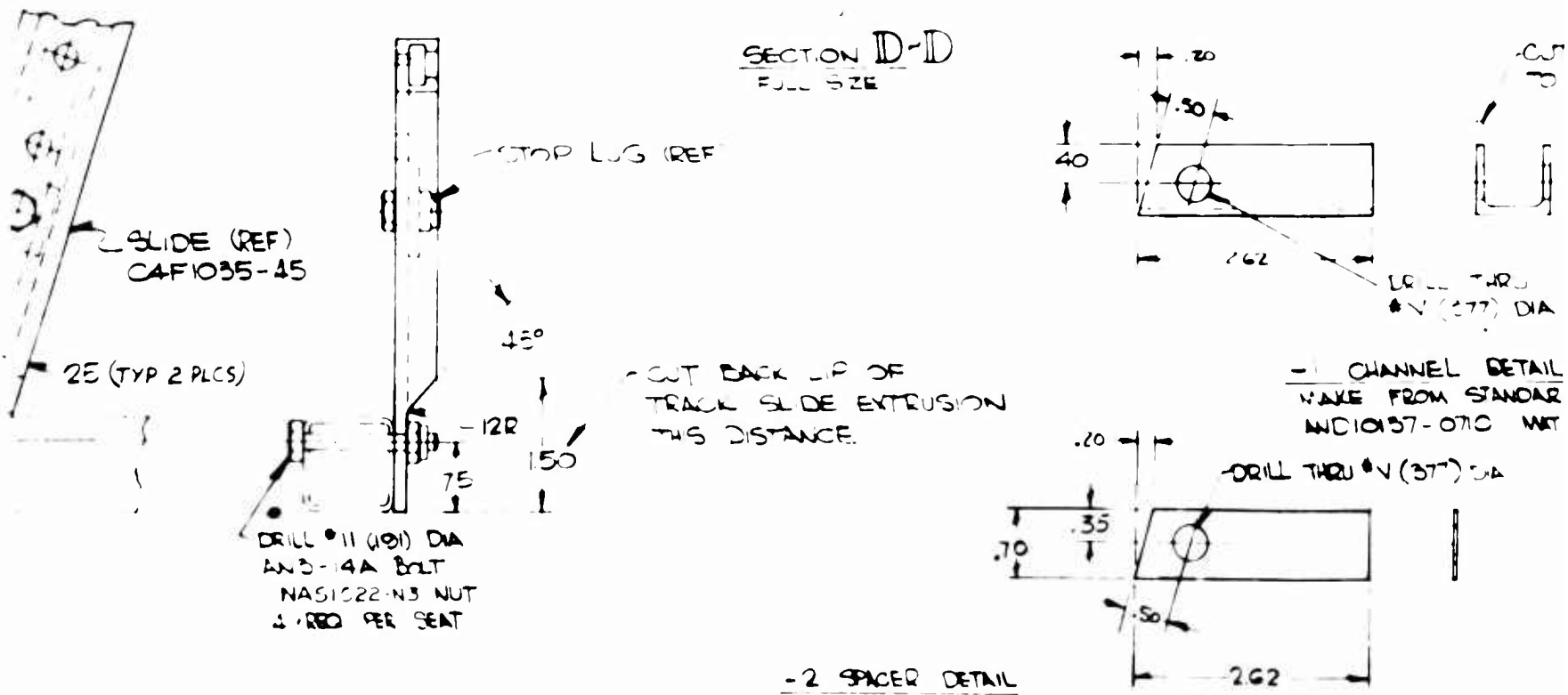


# B

## MODIFICATION DETAIL B FULL SIZE



MODIFICATION G  
REF #2

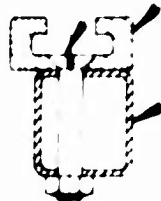


SEAT TUBE (REF)  
CAF 035-1

DRILL  $\frac{1}{4}$  (250) & CHAMFER  
AN509-224 22 BOLT  
NAS 022-24 NUT  
TORQUE 20 IN/LBS MAX

SLIDE (REF)  
CAF 035-13

SEAT TUBE (REF)  
CAF 035-3



SECTION E-E  
FULL SIZE  
TYPICAL SECTION THROUGH  
FASTENER

IS SPACER  
NR CAF 038-11 (REF)

JAS 224-4-23P  
JAS 670 A4  
2 PER AL

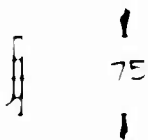
AL - 4 REF

6 FASTENERS ADDED AS SHOWN  
12 PER SEAT ASSEMBLY

EXISTING AN509 BOLT  
AND SLEEVE NUT (REF)

MODIFICATION DETAIL A  
FULL SIZE

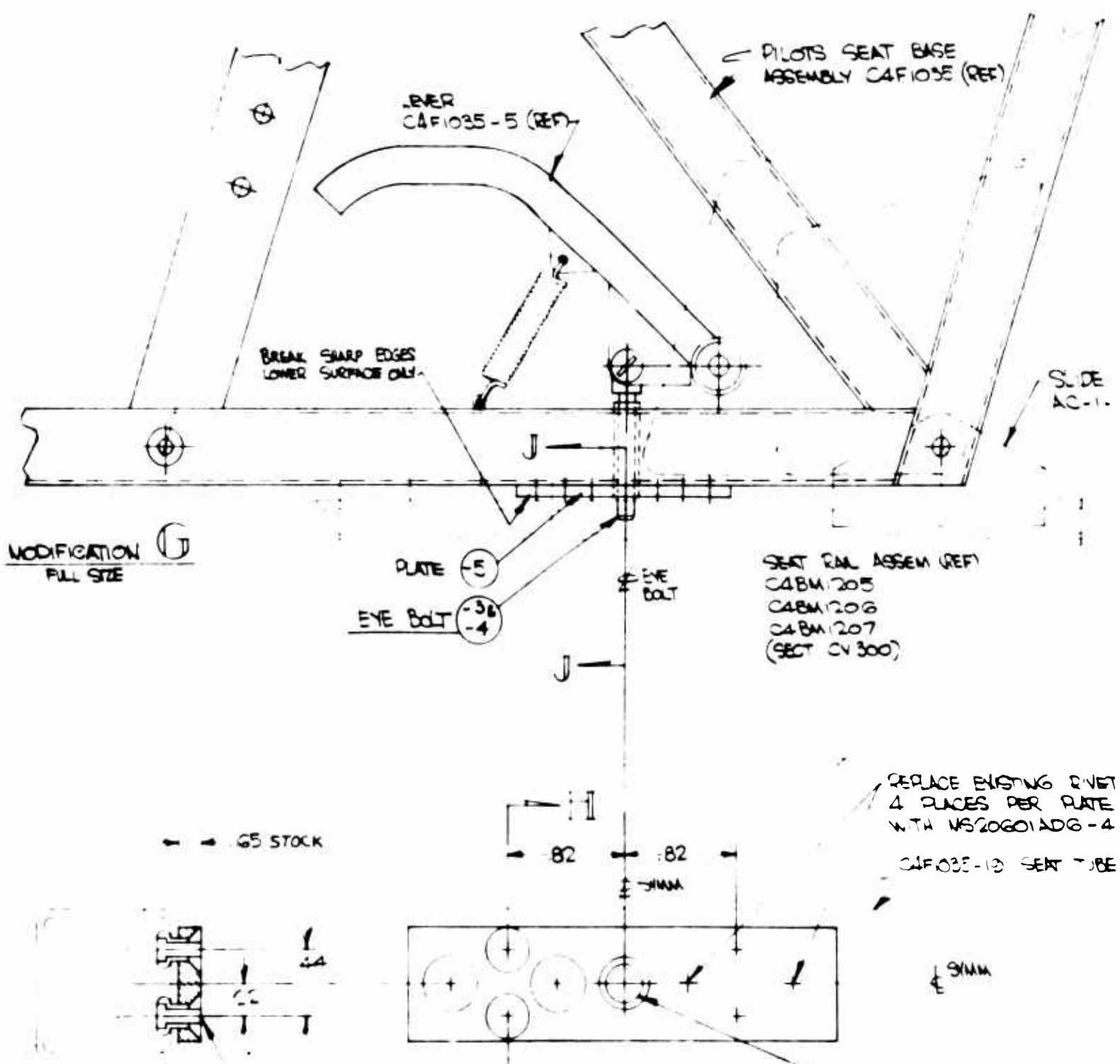
AT BACK CHANNEL  
TO DIMENSION SHOWN



A  
NIL  
ARC SECTION  
MTL 2024-T4

3 NET WEIGHT WITH ALTERNATE #1 2.25-24 = 2.01 LBS  
NET WEIGHT WITH ALTERNATE #2 2.10-24 = 1.86 LBS  
2 THESE PARTS REPLACE EXISTING PARTS NO WEIGHT ADDITION  
1 TOTAL EXISTING WEIGHT REMOVED

NOTES PART NO CAF 035-41 PLATE  $\pm (0.05 \times 4) = 0.2$   
CAF 036-21 PLATE (HARNESS GUIDE)  $\pm 0.05 \times 2 = 0.1$  TOTAL  $\pm 0.3$



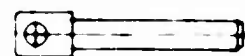
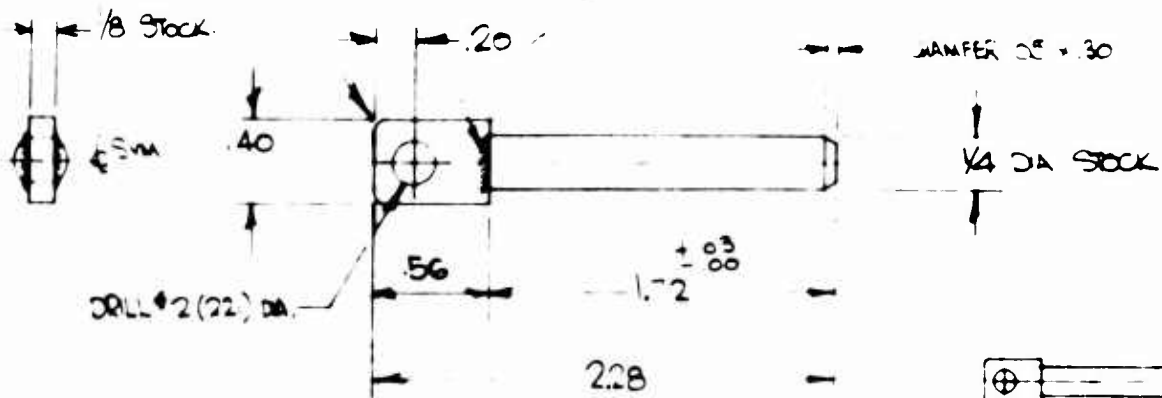
SECTION H-H  
DOUBLE SIZE

NEW RIVET - 4 PLACES  
MS2060 ADG-4

-5 DETAIL - PLATE - DOUBLE SIZE  
REPLACING EXISTING PART NO CAF 1035-4  
2 REQ PER SEAT 1 REQ PER AIRCRAFT  
MATERIAL -  
4130 STEEL - 1.25 x .80 x 3.00  
FINISH - ZINC CHROMATE SPRAY AFTER DRILLING

BREAK SHARP CORNER .062  
OR .06 = 45° CHAMFER

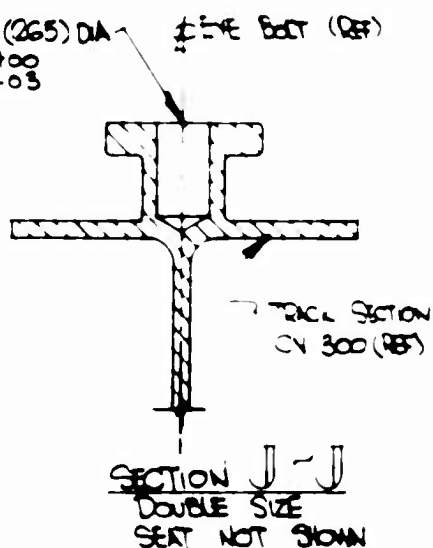
WELD AS SHOWN  
BOTH SIDES



ACTUAL SIZE

E (REF SHEET #1)  
1-14

DRILL 7/16 (265) DIA  
DEPTH .44  $^{+0.00}_{-.03}$



SECTION J-J  
DOUBLE SIZE  
SEAT NOT SHOWN

### DETAIL - EYE BOLT - 36-4

DOUBLE SIZE

REPLACING DEHAVILLAND PART NO

C4FM1075-1 EYE BOLT

MATERIAL -

EYE 430 STEEL 1/8 x .56 x .40

BOLT 430 STEEL 1/4 DIA ROD x 1.75 LG

HEAT-TREAT -

200 - 220,000 PSI.

AFTER WELDING ROCKWELL C42-45

FINISH -

CADMIUM PLATE AFTER HEAT-TREAT

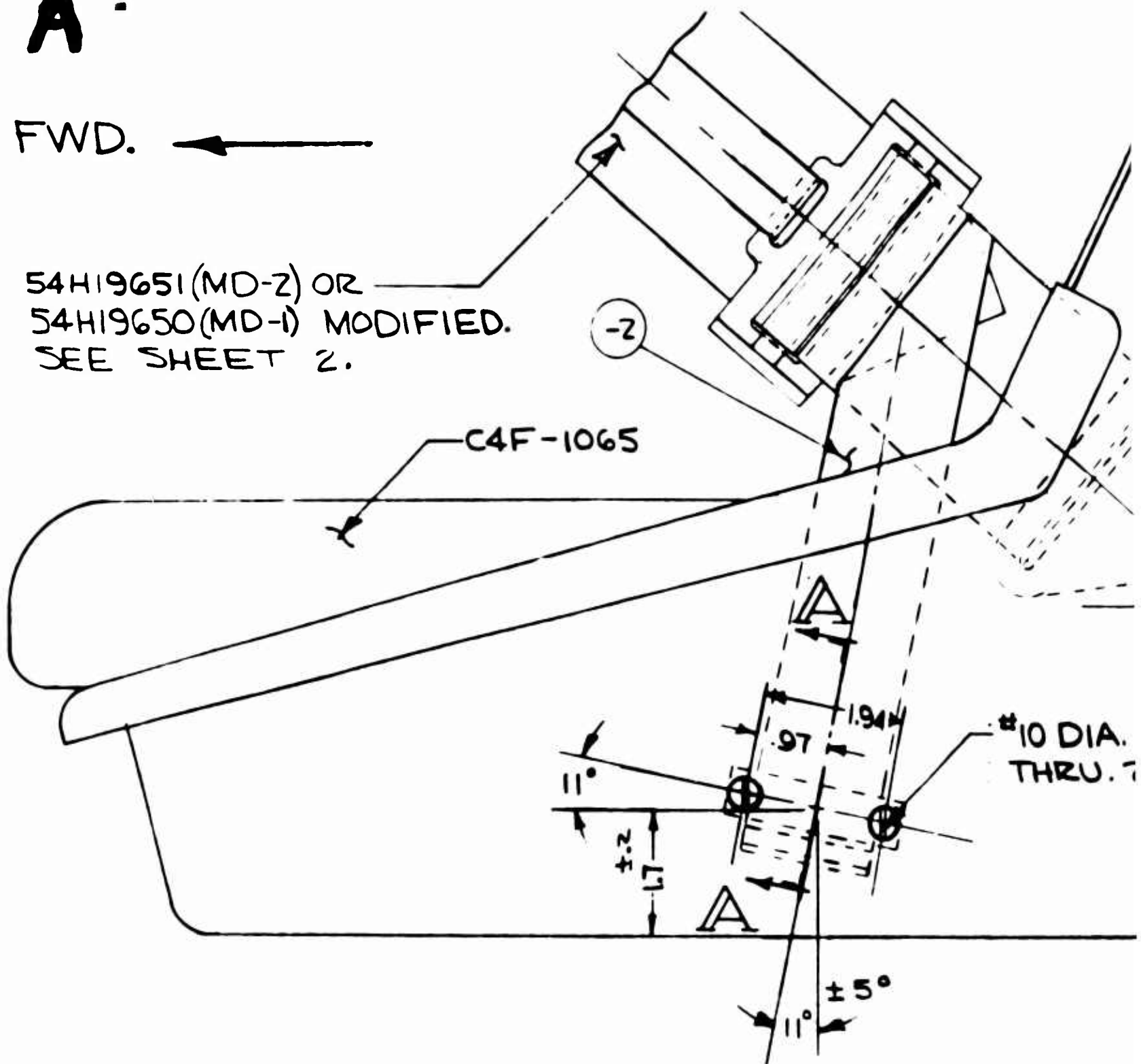
1/8 TS  
1/8  
1/4 BLIND RNET  
BE (REF)

1/4 FOR  
BOLT  
REF

A -

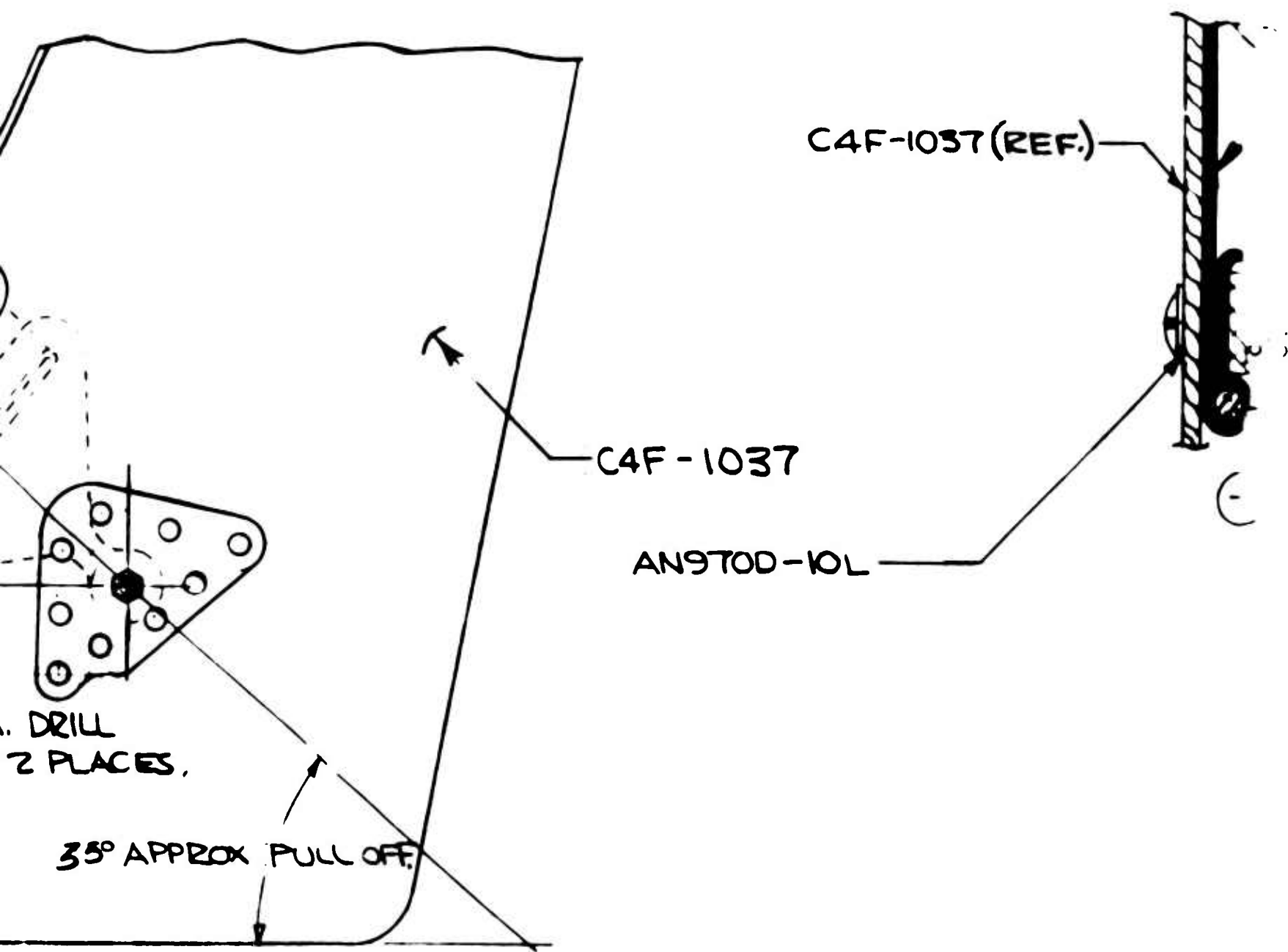
FWD. ←

54H19651 (MD-2) OR  
54H19650 (MD-1) MODIFIED.  
SEE SHEET 2.



### ~NOTES~

1. CEMENT DETAIL-1 TO WEBBING CLAMPING. USE WEAK CEMENT
2. LEFT SIDE OF SEAT IS SHOWN OF SEAT SAME.
3. THIS INSTALLATION IS TYPICAL & CO-PILOT SEAT.
4. THE NOTES & DIMENSIONS ON TYPICAL FOR ALL LAP BELTS TO THE AC-1 AIRCRAFT. SEE SHEET
5. DACRON WEBBING TYPE II PER .085 THICK x 1.72 WIDE MAX. WT.
6. LOCATE ALL DIMENSIONS AFTER



NG BEFORE  
ST.

IN, RIGHT HAND SIDE

EAL FOR BOTH PILOT

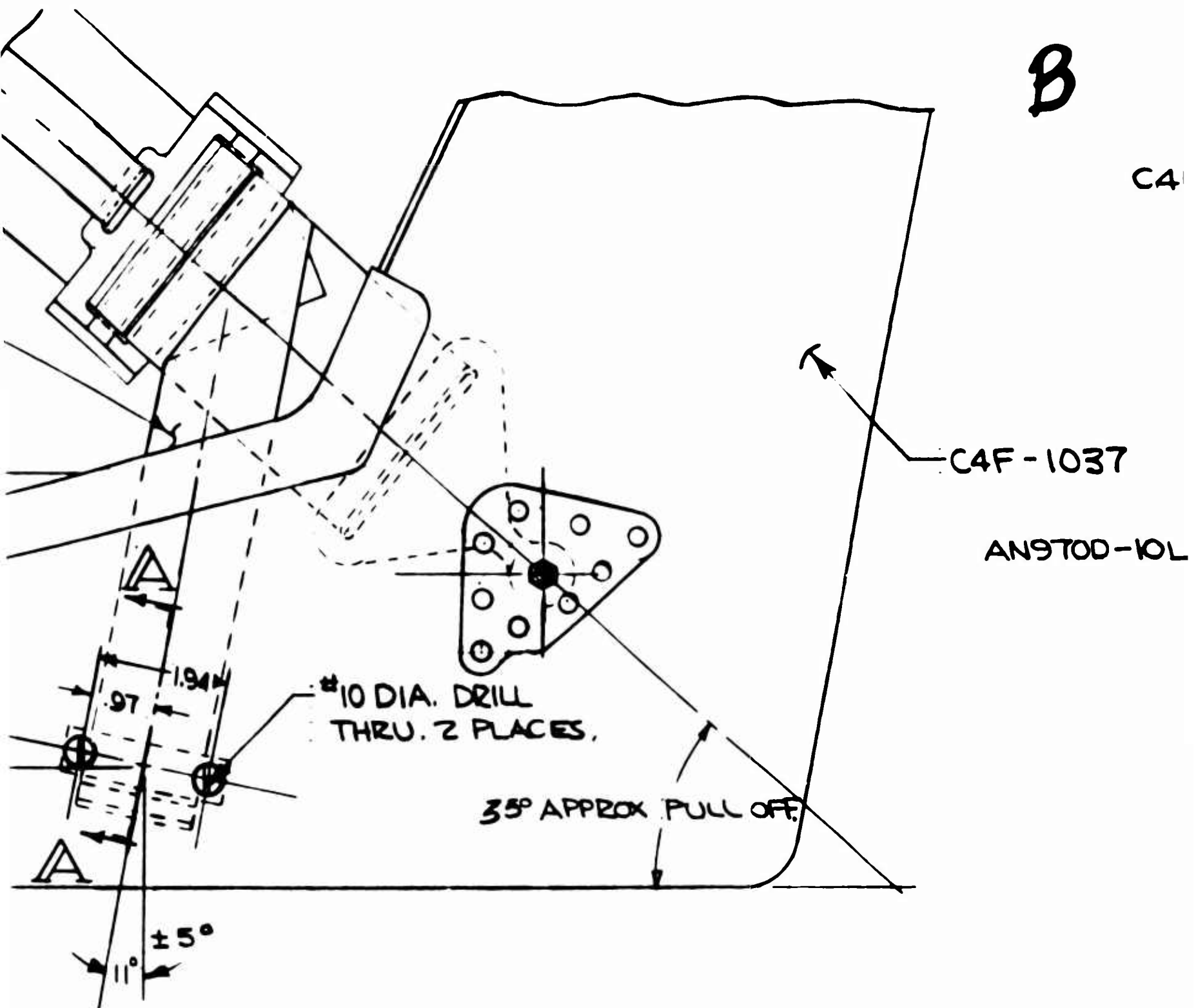
U THIS SHEET ARE  
THAT MAY BE USED ON  
ET 2.

SPEC. MIL-W-25361,.065 -  
T. 2.10 OZ/YD. MAX..

2 LAP BELT IS POSITIONED TO 35° PULL OFF.

**B**

C4



### NOTES

DETAIL-1 TO WEBBING BEFORE

G. USE WEAK CEMENT.

IDE OF SEAT IS SHOWN, RIGHT HAND SIDE  
T SAME.

USTALLATION IS TYPICAL FOR BOTH PILOT  
LOT SEAT.

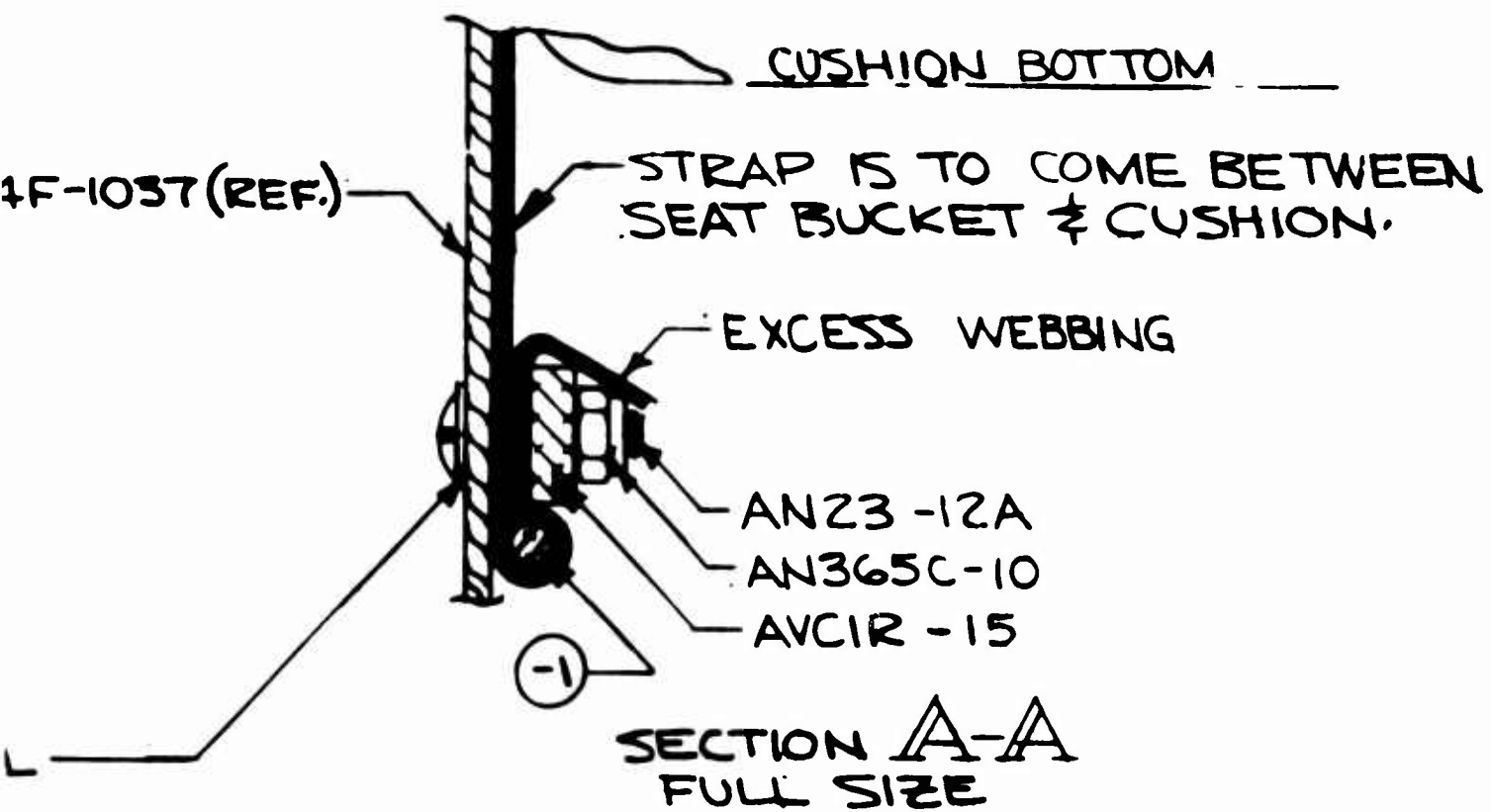
TES & DIMENSIONS ON THIS SHEET ARE

FOR ALL LAP BELTS THAT MAY BE USED ON  
-1 AIRCRAFT. SEE SHEET 2.

WEBBING TYPE II PER SPEC. MIL-W-25361, .065-

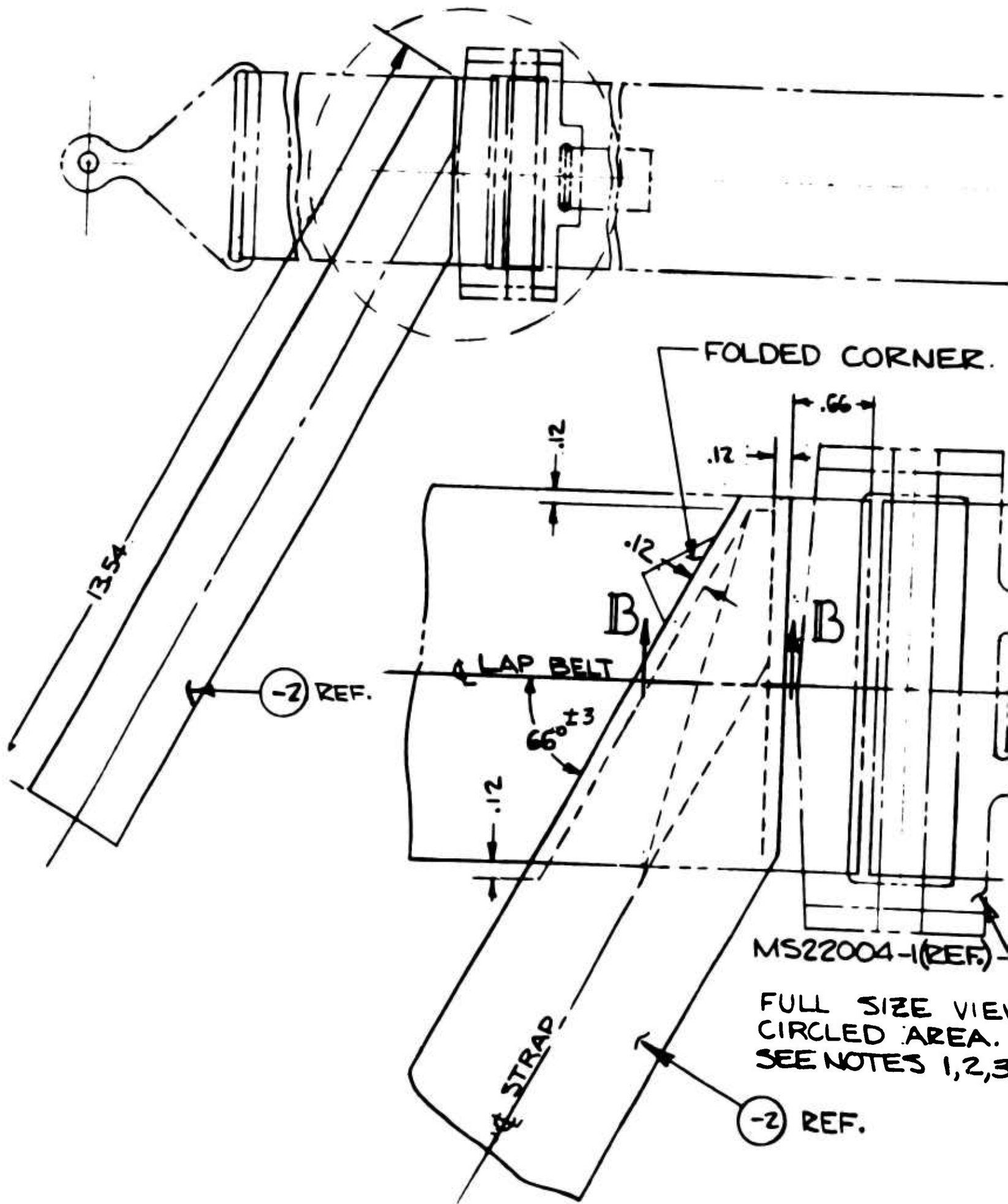
.K x 1.72 WIDE MAX. WT. 2.10 OZ/YD. MAX..

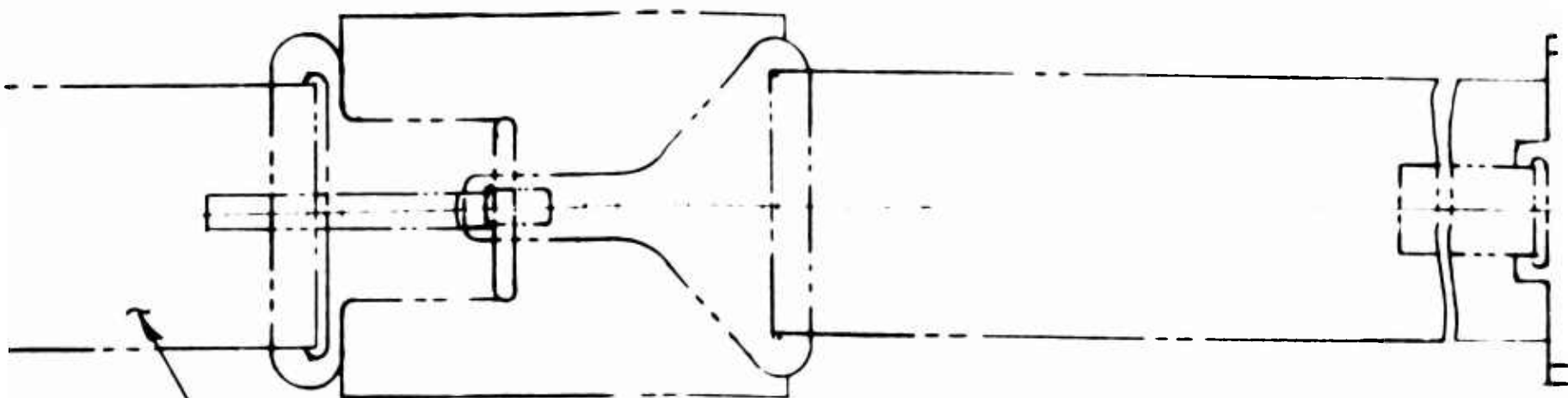
ALL DIMENSIONS AFTER LAP BELT IS POSITIONED TO 35° PULL OFF





A

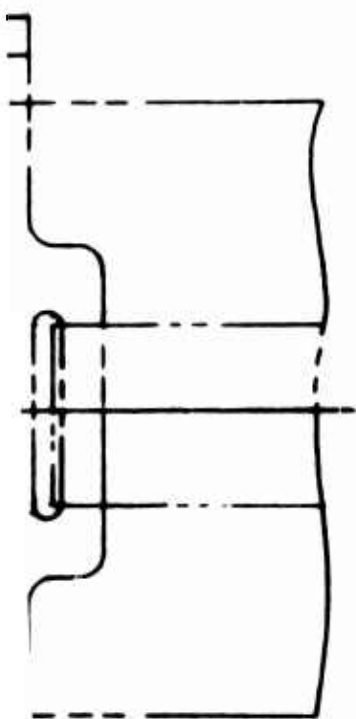




54H19651 (MD-2) OR 54H19650 (MD-1) REF.

### ~ NOTES ~

1. LEFT HAND SIDE SHOWN RIGHT HAND SIDE
2. STITCHING IS TO BE AS SHOWN AND SHALL BE NYLON CORD, MIL-T-7807B NO.3 SIZE TYPE I, AND SHALL CONTAIN NOT LESS THAN 6 OR 8 STITCHES PER INCH IN ACCORDANCE WITH DDD-S-751-301.
3. ENDS OF STITCHING SHALL BE BACK STITCHED
4. SEAR ENDS OF ALL WEBBING TO PREVENT
5. STITCHING INDICATED - - - - - .



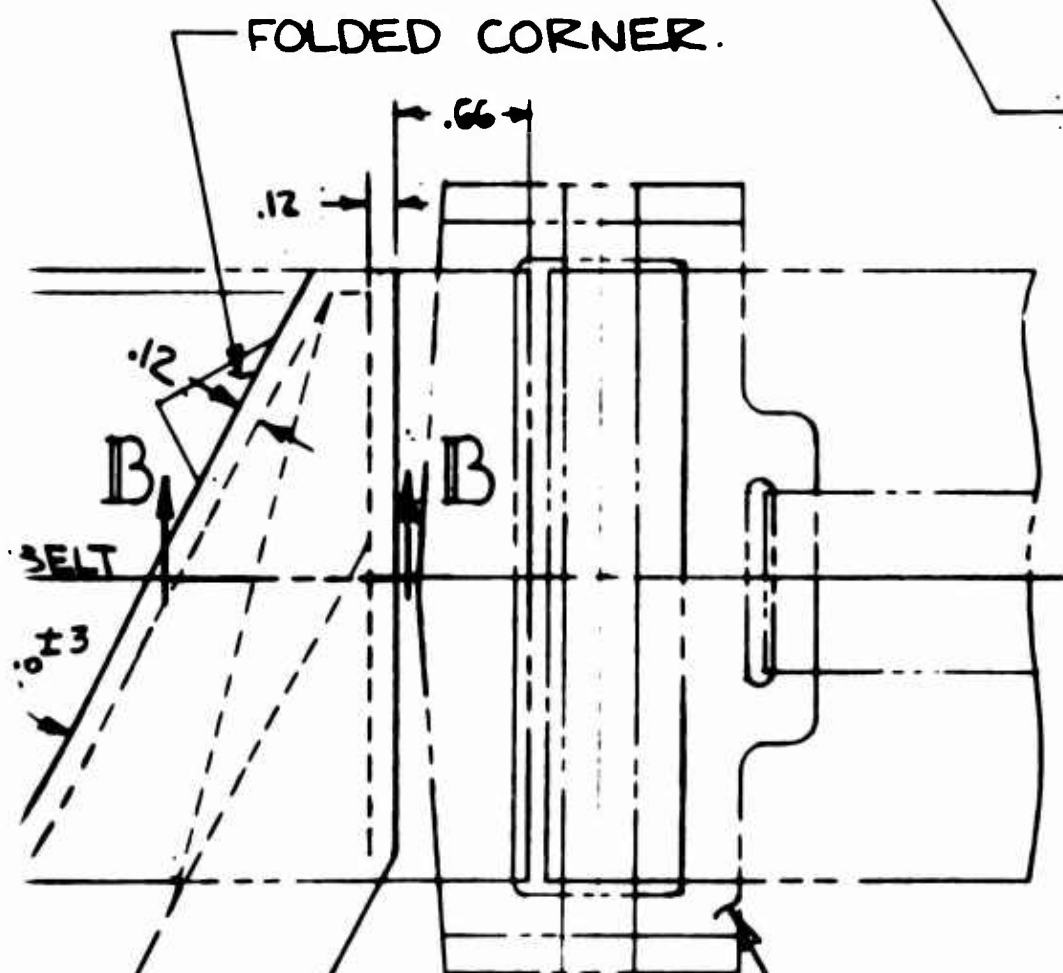
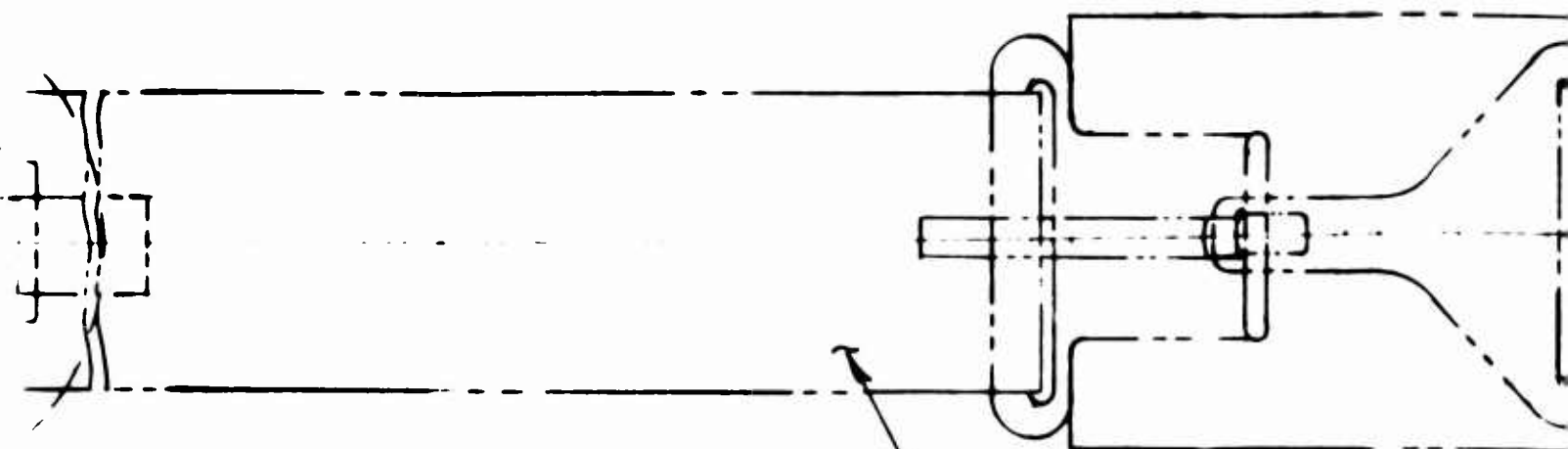
VIEW OF  
3, 4 & 5.

FOLD STRAP  
UNDER BEFORE  
STITCHING.



SECTION B-B  
FULL SIZE

B



54H19651 (MD-2) OR 5

1. LEF
2. STI
- NYL
- I, A
- 8 S
- DDI
3. END
4. SE
5. STI

MS22004-1 (REF.)

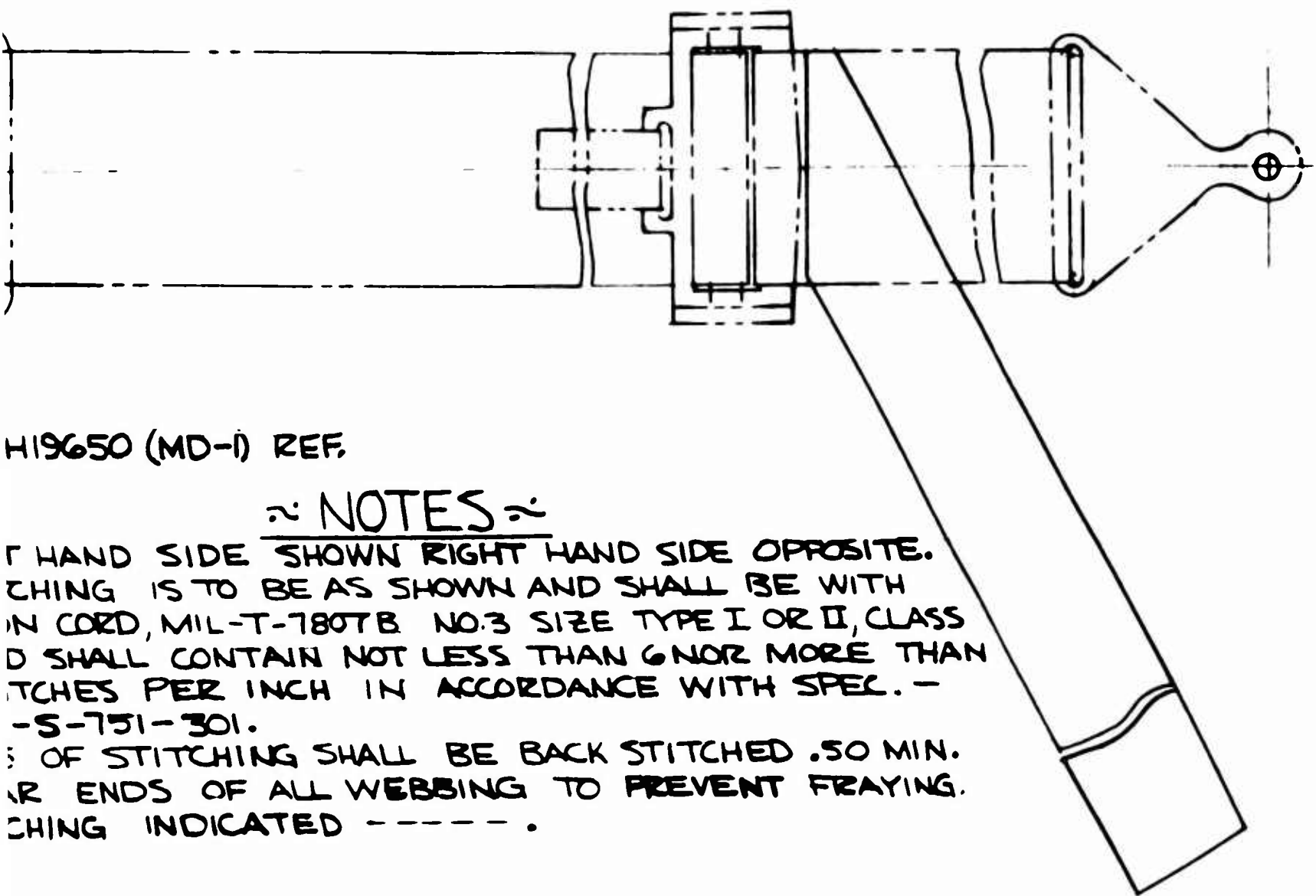
FULL SIZE VIEW OF  
CIRCLED AREA.  
SEE NOTES 1, 2, 3, 4 & 5.

(-2) REF.

FOLD STRAP  
UNDER BEFO  
STITCHING



SECTION B  
FULL SIZE



H19650 (MD-1) REF.

~ NOTES ~

RIGHT HAND SIDE SHOWN RIGHT HAND SIDE OPPOSITE.  
 STITCHING IS TO BE AS SHOWN AND SHALL BE WITH  
 CORD, MIL-T-780TB NO.3 SIZE TYPE I OR II, CLASS  
 D SHALL CONTAIN NOT LESS THAN 6 NOR MORE THAN  
 STITCHES PER INCH IN ACCORDANCE WITH SPEC. -  
 -S-751-301.  
 5 OF STITCHING SHALL BE BACK STITCHED .50 MIN.  
 AT ENDS OF ALL WEBBING TO PREVENT FRAYING.  
 STITCHING INDICATED -----.

A

BL 2915 LEFT

2030 (REF)

SEAT TRACK (REF.)

RAIL ASSEMBLY (REF)  
C4BM1205-1  
C4BM1207-1

TOP OF COCKPIT FLOOR (REF.)

RAIL SECT  
DH STD

FLOOR BEAM  
STA 60 BLKD  
C4B1170-57 (REF)

EXISTING TOOLING  
HOLE IN FLOOR BEAM (REF)

AN4-5A BOLT  
AN365-4 NUT  
AN960-416 WASHER  
8 REQ EA (PER A/C)

(1) ANGLE

AN470DG RIVET: 6 PLACES  
THIS RIVET PATTERN IS  
IDENTICAL FOR BL 2915 R

DRILL # F (257)  
2 HOLES

3. + INDICATES NEW RIVET LOCATION  
PER THIS DWG (AN470DG RIVET)
2. ALL VIEWS LOOKING FORWARD EXCEPT  
WHERE OTHERWISE NOTED
1. EXISTING TOOLING HOLES AT BL 2915 L, 885 L,  
2915 R & 885 R TO BE UTILIZED FOR AN470DG RIVET

NOTES

B

FORWARD

STA  
60

B  
8.85 REF

REF)

SEAT  
TRACK (REF)

RAIL ASSEMBLY (REF)  
C4BM 206-1  
C4BM 208-1

CTION  
ID CV300 (REF)

TOP OF FLOOR BEAM  
FLOOR PLATE NOT SHOWN (REF)

W.L  
148.86

ANGLE (-)

EXISTING TOOLING  
HOLE (REF)  
IN FLOOR BEAM

EXISTING RIVET PATTERN  
AN470AD4 (REF)

SECTION A-A  
FULL SIZE  
LOOKING OUTBOARD  
AFT

REMOVE EXISTING RIVETS  
DRILL #11 (101) G PLACES  
AN470DG RIVET 6 REQ

CHANNEL SECTION  
C4B1170-23 (REF)

PANEL ASSEMBLY STA 60 BLKD  
C4B1170-23 (REF)

STEP WELL (REF)

ANGLE 4 REQ PER A.C

1ST CHOICE: FORMED FROM SHEET  
2ND CHOICE: EXTRUDED SECTION  
AN10134-2001  
(2 x 1 x 125 x 156R)

STA

B

BL  
29.5 LEFT

STA  
60

20 30 (REF)

SEAT  
TRACK (REF)

RAIL SECTION  
DH STD CV300 (REF)

W.L.  
148.86

ANGLE (1)

AN4-5A BOLT  
AN3G5-4 NUT  
AN8G0-41G WASHER  
8 REQ EA (PER A/C)

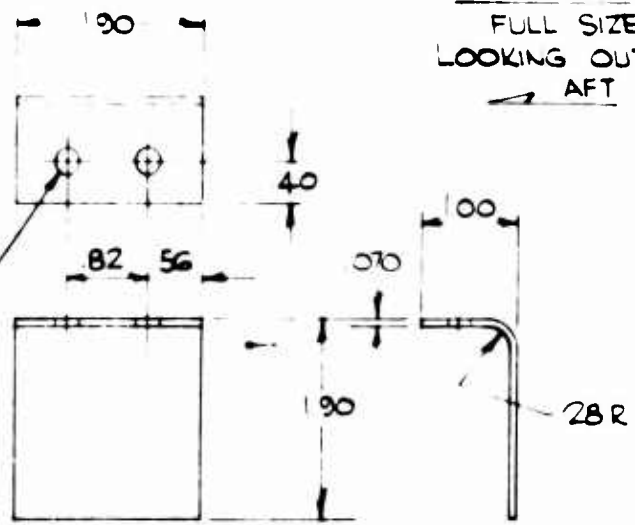
(1) ANGLE

AN470D6 RIVET - 6 PLACES  
THIS RIVET PATTERN IS  
IDENTICAL FOR BL. 29.15 R

.24

SECTION A-A  
FULL SIZE  
LOOKING OUTBOARD  
AFT

DRILL # F (257)  
2 HOLES



(1) ANGLE 4 REQ PER A/C

1ST CHOICE: FORMED FROM SHEET  
2ND CHOICE: EXTRUDED SECTION  
AN10134 - 2001  
(2 x 1 x .125 x .156R)

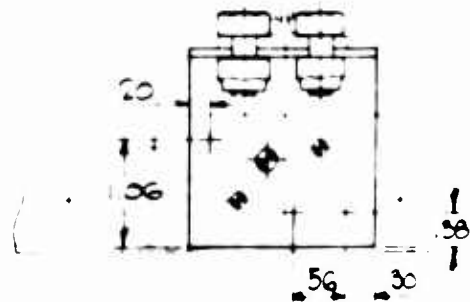
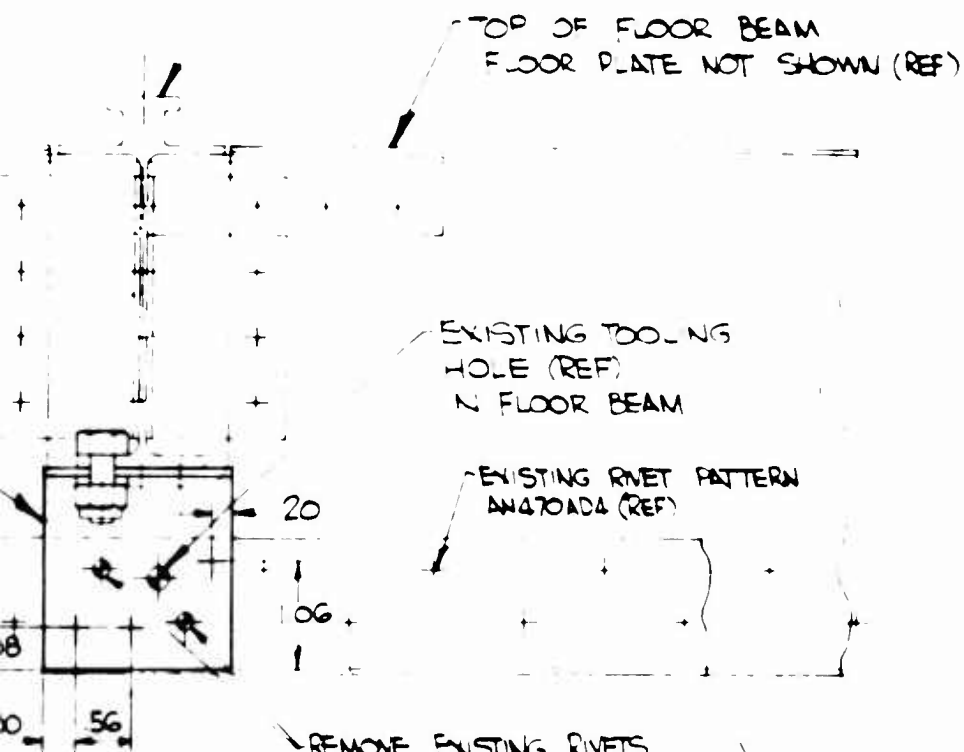
B  
885 LEFT

B  
885 RIGHT

SEAT  
TRACK (REF)

RAIL ASSEMBLY (REF)  
C4BM 206-1  
C4BM 208-1

TRACK (REF)



REMOVE EXISTING RIVETS  
DRILL #11 (191) 6 PLACES  
AN470DG RIVET 6 REQ

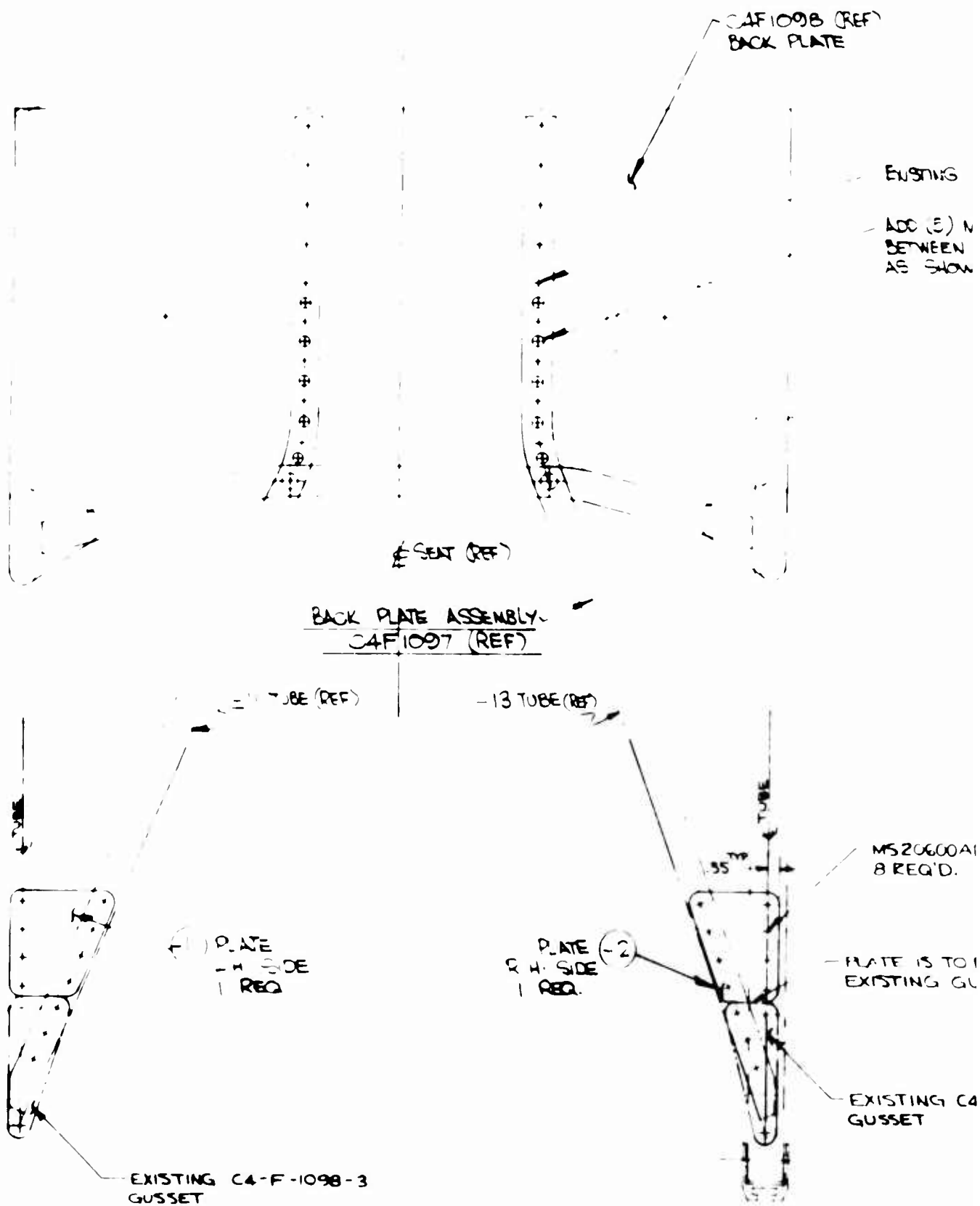
CHANNEL SECTION  
C4B1170-63 (REF)

T

PANEL ASSEMBLY STA 20 BLKD  
C4B1170-23 (REF)

STEP WELL (REF)





A technical drawing of a rectangular plate. The overall width is labeled as 295 at the bottom center. The overall height is labeled as 165 on the left side. On the right side, there are two vertical dimension lines: one spanning most of the height labeled 280, and another below it labeled 70. There are four horizontal holes along the top edge, each with a diameter of .75. There are also four horizontal holes along the bottom edge, each with a diameter of .75. The distance between the first and second holes on both the top and bottom edges is .95. The distance between the second and third holes is .75. The distance between the third and fourth holes is .75. A dashed line runs diagonally from the top-left corner towards the center-right. At the end of this dashed line, there is handwritten text: "HOLE # 10 (.98) DIA" and "8 PLACES".

- 2 PLATE DETAIL  
R H SIDE - FULL SIZE

.35R. OR .25 = 45°  
CHAMFER. TYPICAL.

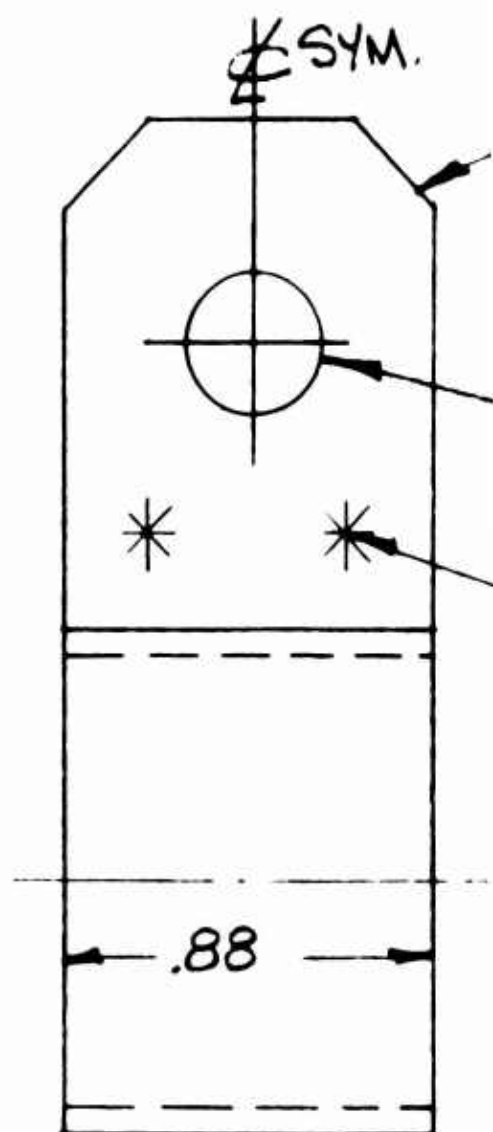
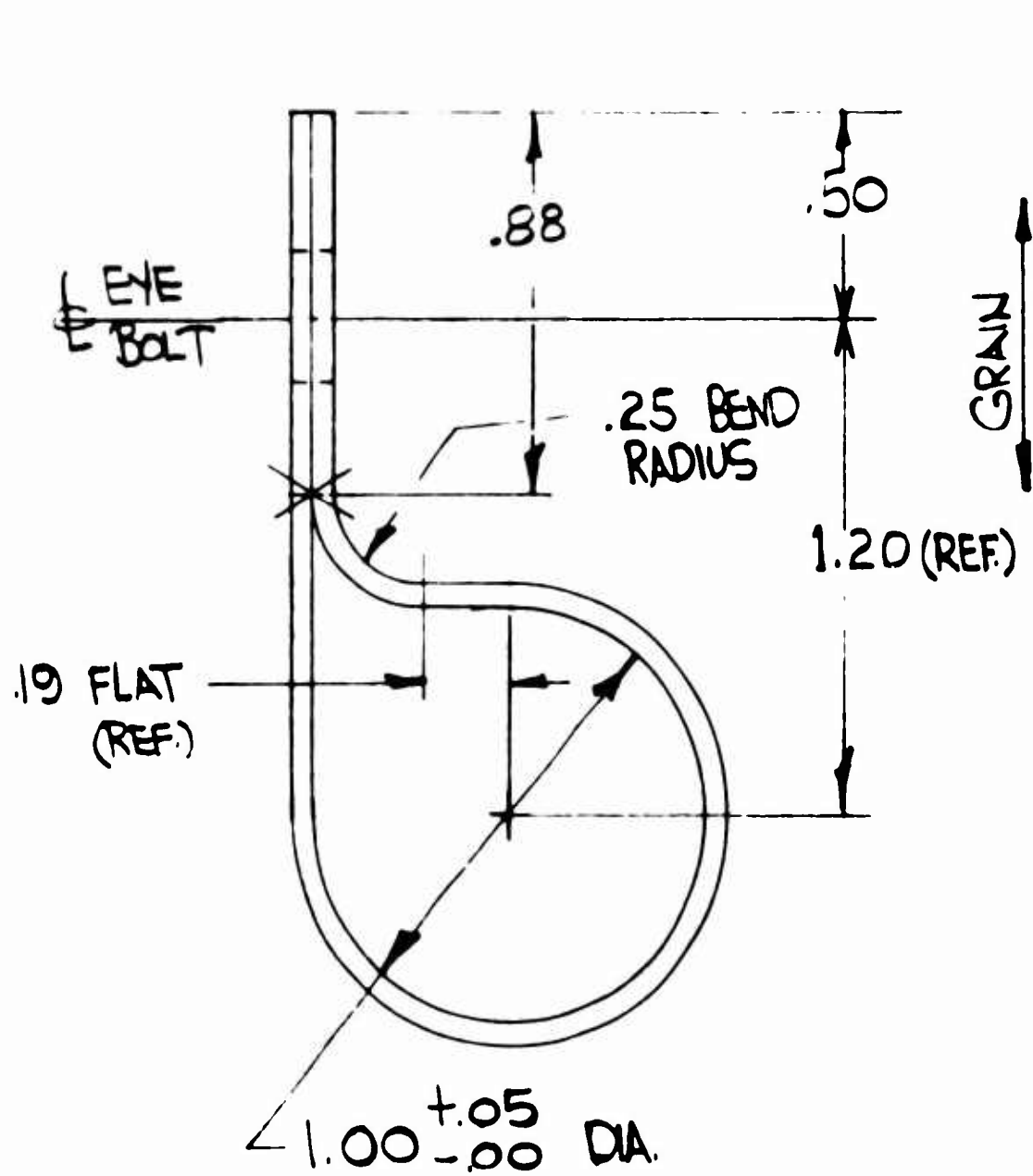
DRILL #40(.0984)  
8 PLACES

The drawing shows a rectangular plate with a width of 3.24 and a height of 3.22. The top edge has a chamfer of .35R. OR .25 = 45°. The bottom edge has a chamfer of .35R. OR .25 = 45°. The plate has 8 drill holes, each with a diameter of #40(.0984). The holes are arranged in two rows of four, with a horizontal spacing of .75 between them and a vertical spacing of .75 between the rows. The overall width is 3.24 and the overall height is 3.22. The text '295' is written in the center of the plate.

ORE FLUSH WITH  
GUSSET. (TYPICAL)

- PLATE DETAIL  
- H SIDE - FULL SIZE

12

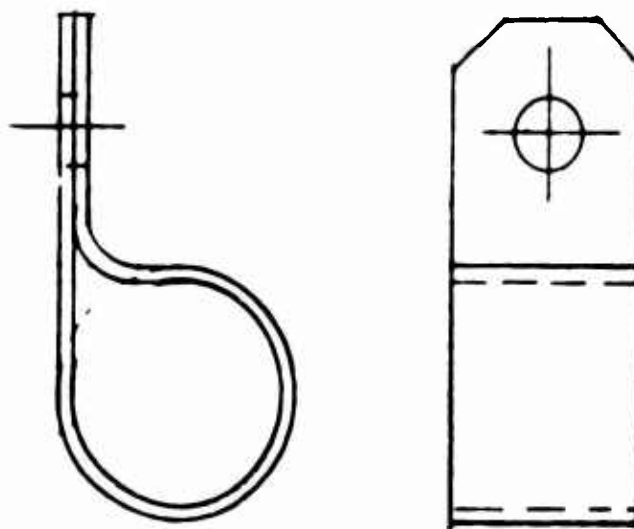


BREAK SHARP CORNERS  
.2 x .45° CHAMFER OR  
.25 RADIUS OPTIONAL.

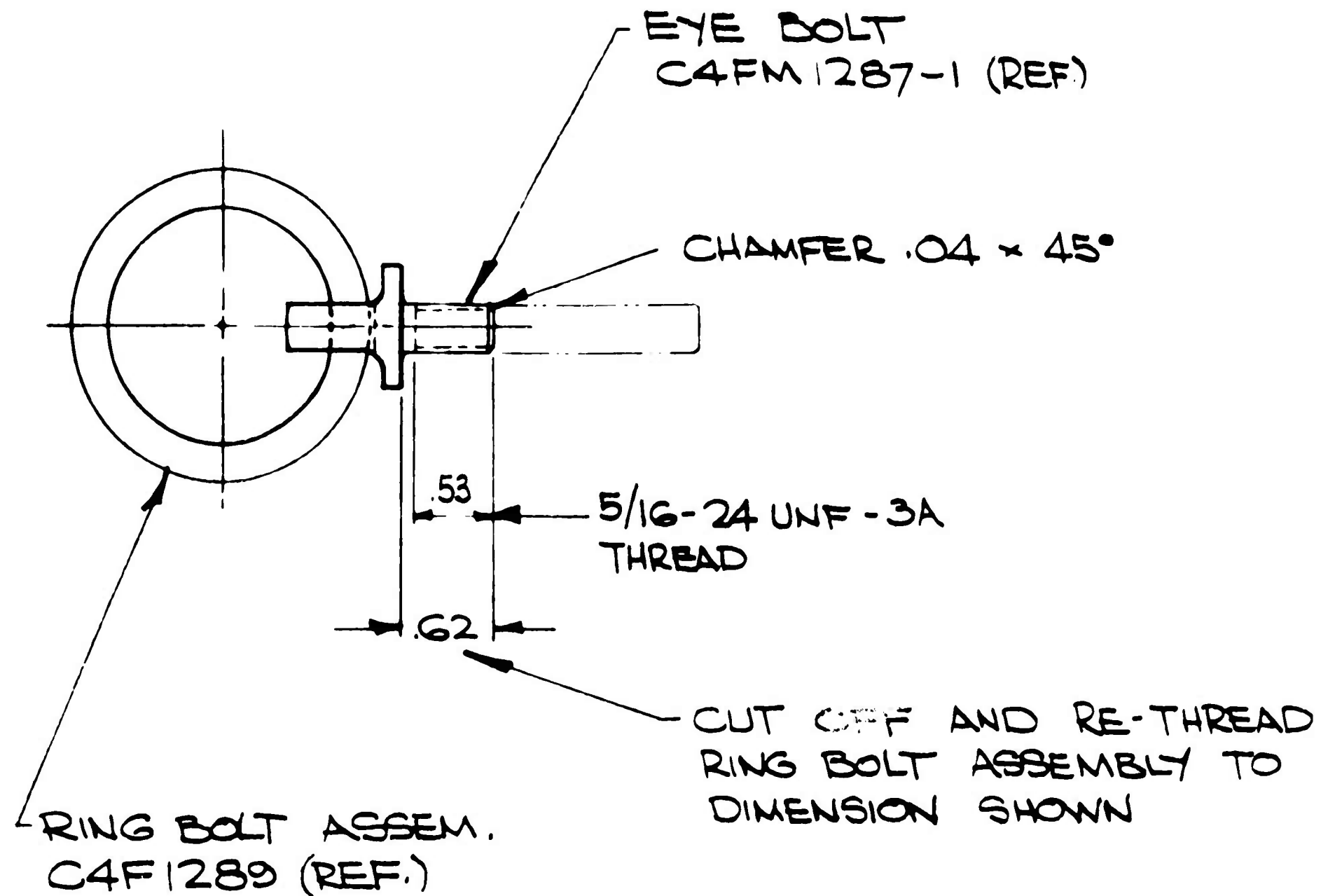
LINE DRILL #0 (.316) DIA.  
AFTER FORMING

SPOTWELD  
2 PLACES

SEAT TUBE (REF.)



ACTUAL SIZE



2. WT. OF EYE BOLT REMOVED = .029 LBS.

WT. OF EYE BOLT AC-1-21 = .144 LBS.

WT OF EYE BOLT C4FM1287-1 = .173 LBS.

1. ZINC CHROMATE PRIMER DIP ON REWORKED AREA

NOTE:-

# A

STA 93

STA 98

40 REF  
TROUGH SEAT TYPICAL

DETAIL A

DETAIL B

C4F1875-11 SEAT  
LOCATION UNCH

STA 118

STA 198

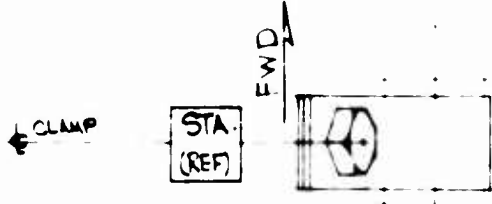


DETAIL A  
WEBBING TO BE MOVED  
FWD ON TUBE TO ACCOMMODATE  
SEAT SPREADER TUBE

CANVAS WEBBING  
ON SEAT BOTTOM (REF)

SPREADER TUBE  
(REF)

DETAIL C



FORMER SECTION (REF)

FORMER SECTION (REF)

BOLT  
AN5-5A

SEAT TUBE (REF)

D1450-11-12  
SECTION (REF)  
DV338)

.S627A5 ANCHOR NUT  
.426AD4 RIVET W/SHANK  
ONBOARD SIDE OF RAIL

-CLAMP STRAP  
AC-1-20

C4D1450 PANEL (REF)

RING BOLT  
AC-1-21  
58 REQ PER 4C

SEAT TUBE  
C4F1875 (REF)

C4B1450 PANEL (REF)

FORMER SECT. (REF)

RING BOLT  
AC-1-21

DL  
3969

DETAIL A

(FULL SIZE) LOCATED BY SYMBOL  
TYPICAL AND USED AT  
FOLLOWING STATIONS:

108	188	268	348
28	208	288	368
148	228	308	388
168	248	328	408

DETAIL B

(FULL SIZE) INDICATED BY SYMBOL  
TYPICAL AND USED AT  
FOLLOWING STATIONS:

120.5	220.5	320.5
145.5	245.5	345.5
170.5	270.5	370.5
	295.5	395.5

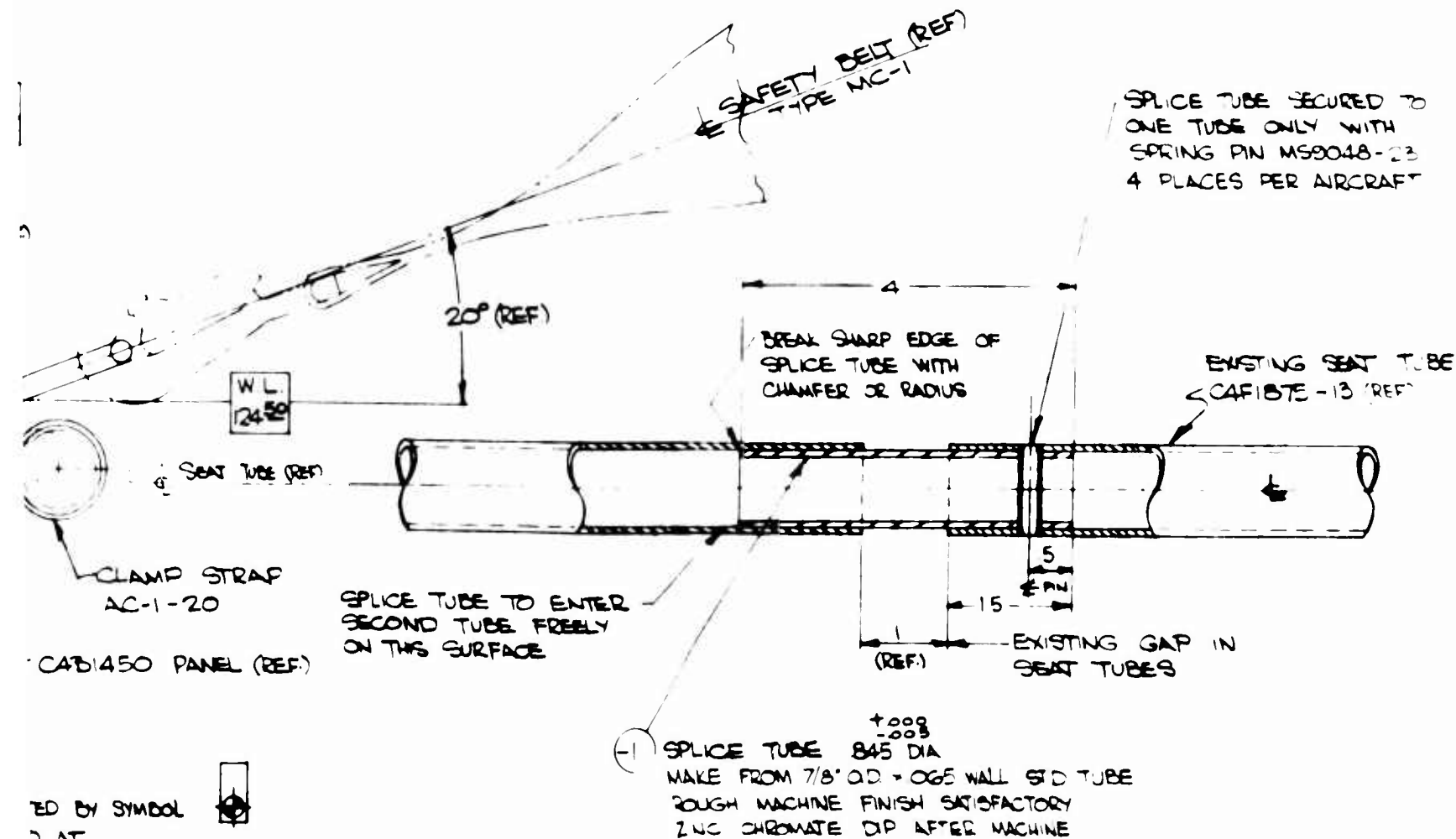
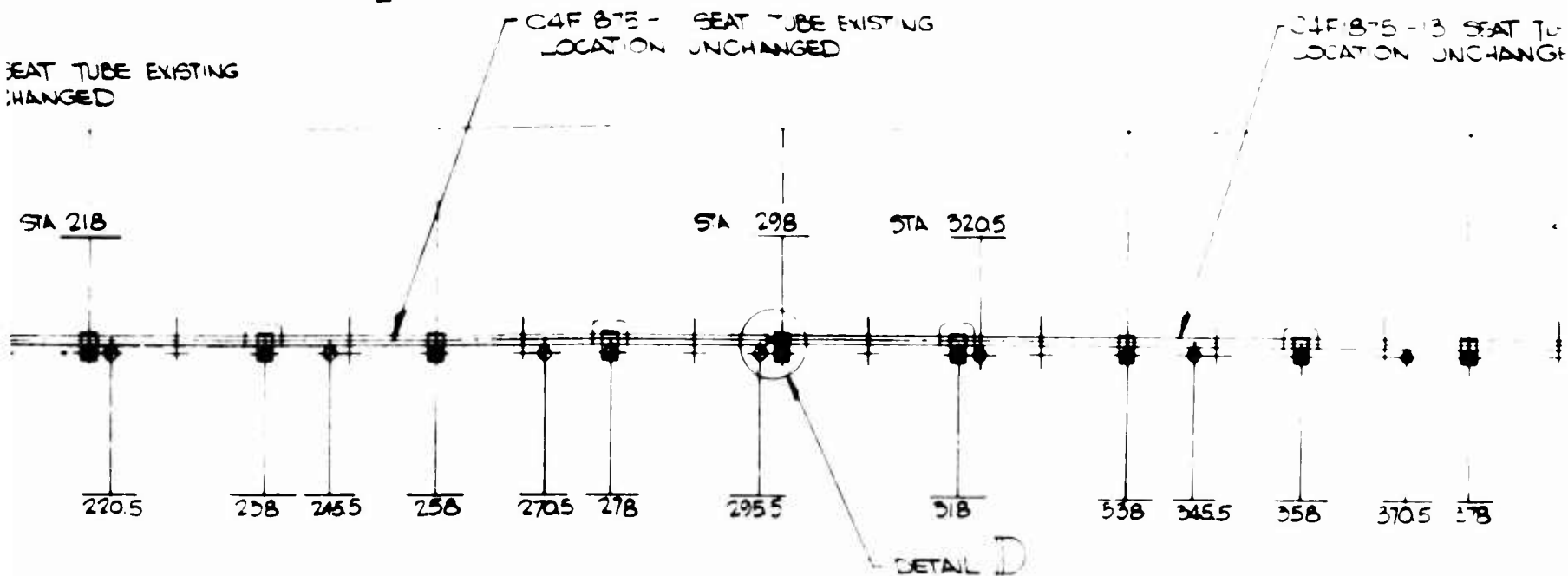
DETAIL C

(FULL SIZE) INDICATED BY SYMBOL  
TYPICAL AND USED AT  
FOLLOWING STATION:

98	178	258
118	198	278
138	218	298
158	238	318

FORWARD

AIRCRAFT SYMM L H SIDE SHOWN R H FUSELAGE STATIONS IDENTICAL



SPLICE TUBE SECURED TO ONE TUBE ONLY WITH SPRING PIN MS9048-23 4 PLACES PER AIRCRAFT

ED BY SYMBOL  
D AT  
ONS.



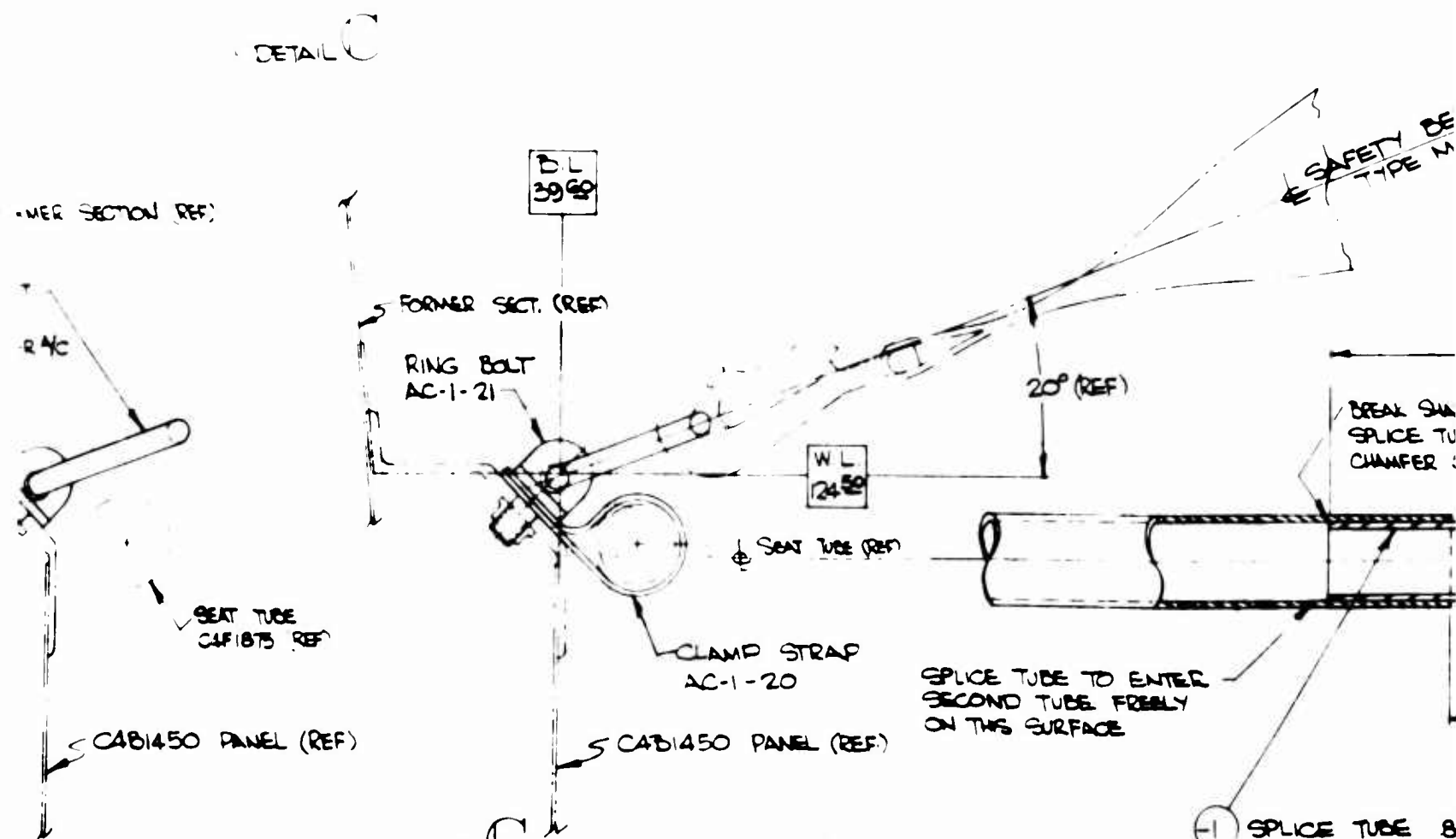
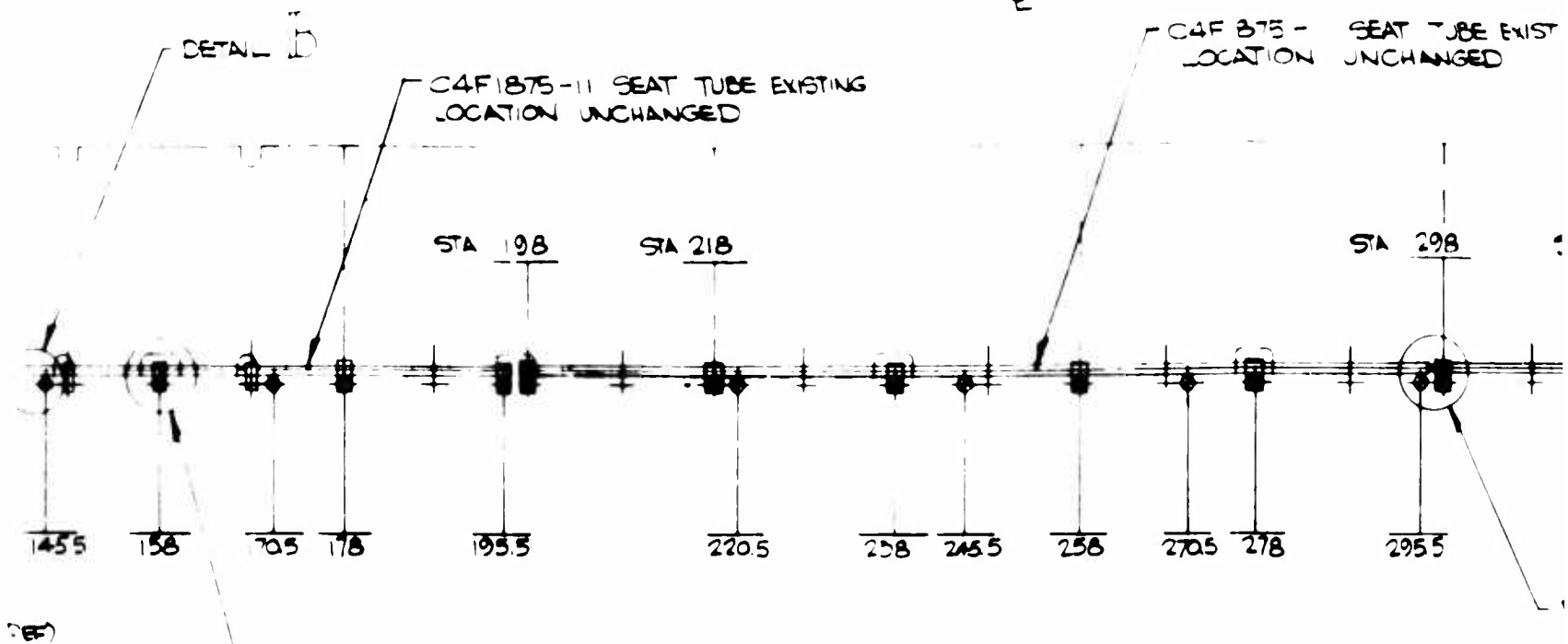
338 415.5  
358 195.5  
378  
398

DETAIL D SPLICE  
FULL SIZE AT APPROX STA  
297 - L & R

# B

FORWARD

AIRCRAFT SYMM - H SIDE



ATED BY SYMBOL

USED AT

ATIONS:

5 320.5

5 345.5

5 370.5

5 395.5

DETAIL C

(FULL SIZE) INDICATED BY SYMBOL

TYPICAL AND USED AT

FOLLOWING STATIONS:

98	178	258	338	415.5
118	198	278	358	195.5
138	218	298	378	
158	238	318	398	

DETAIL

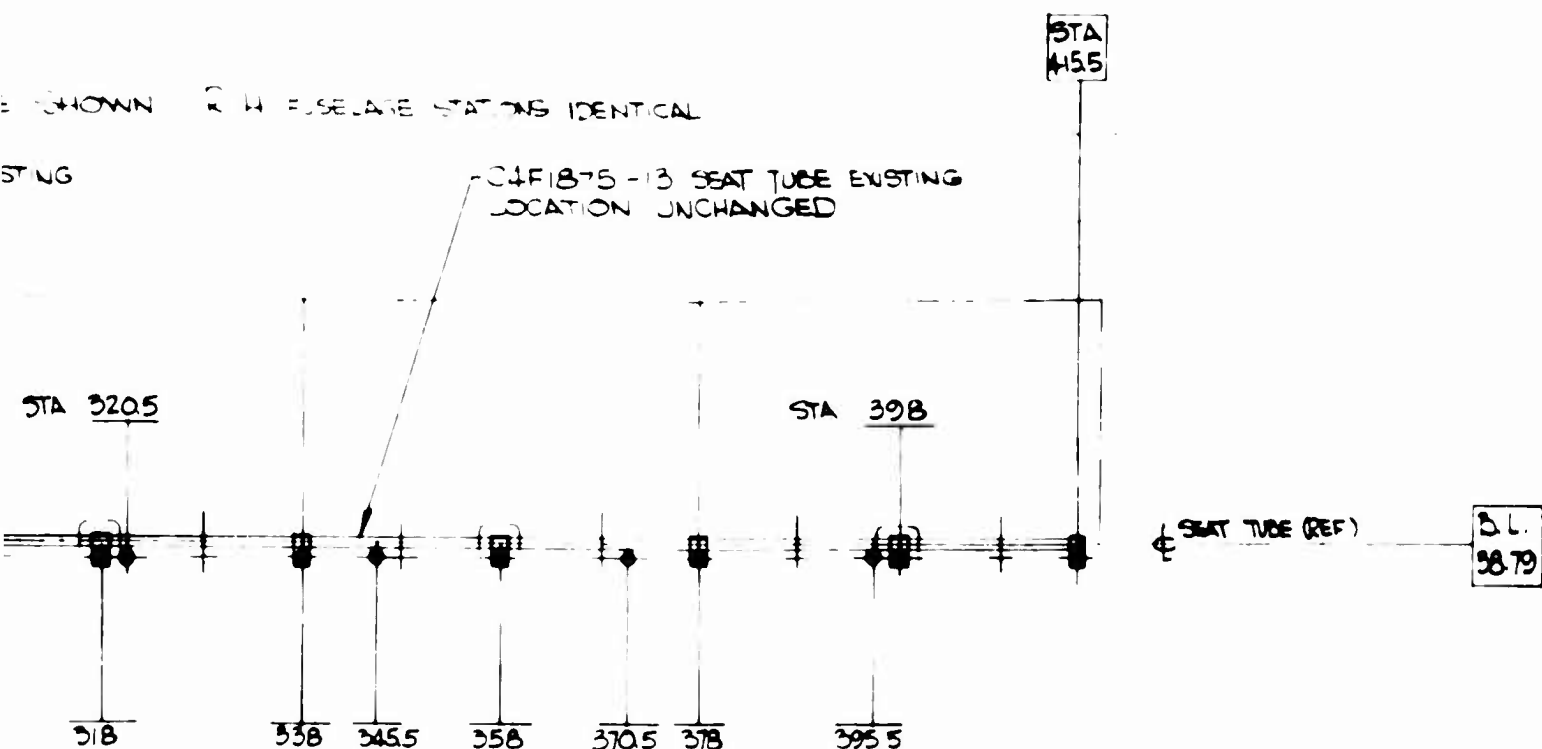
FULL SIZE

297 L &



SHOWN R H FUSELAGE STATIONS IDENTICAL

STING



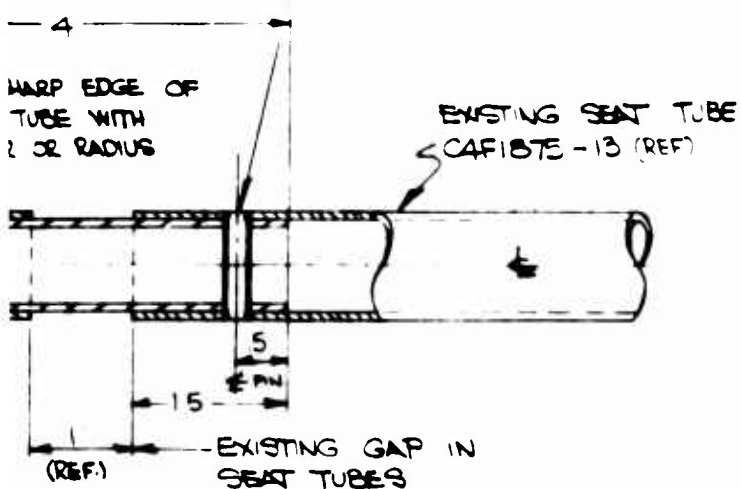
DETAIL D

SEAT (REF)  
MC-1

SPICE TUBE SECURED TO  
ONE TUBE ONLY WITH  
SPRING PIN MS9048-23  
4 PLACES PER AIRCRAFT

3. EXISTING WEIGHT REMOVED, PART NO C4FC1849-3  
AND C4FC1849-1, .3 LBS \* 58 = -7.54 LBS
- 2 PART NO C4FM1287-1 MODIFIED = - .68 LBS
- 1 TOTAL EXISTING WEIGHT REMOVED = -8.22 LBS

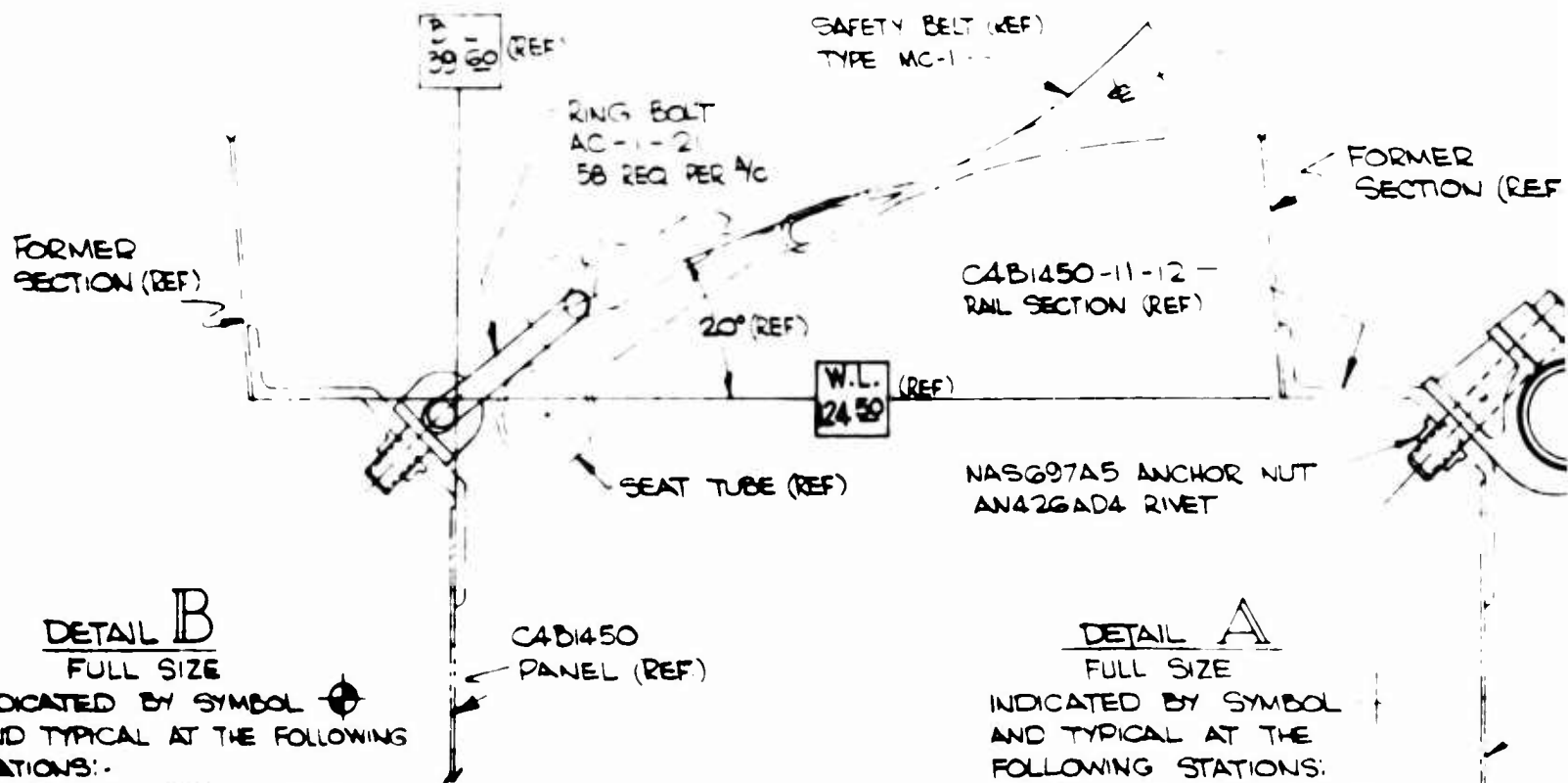
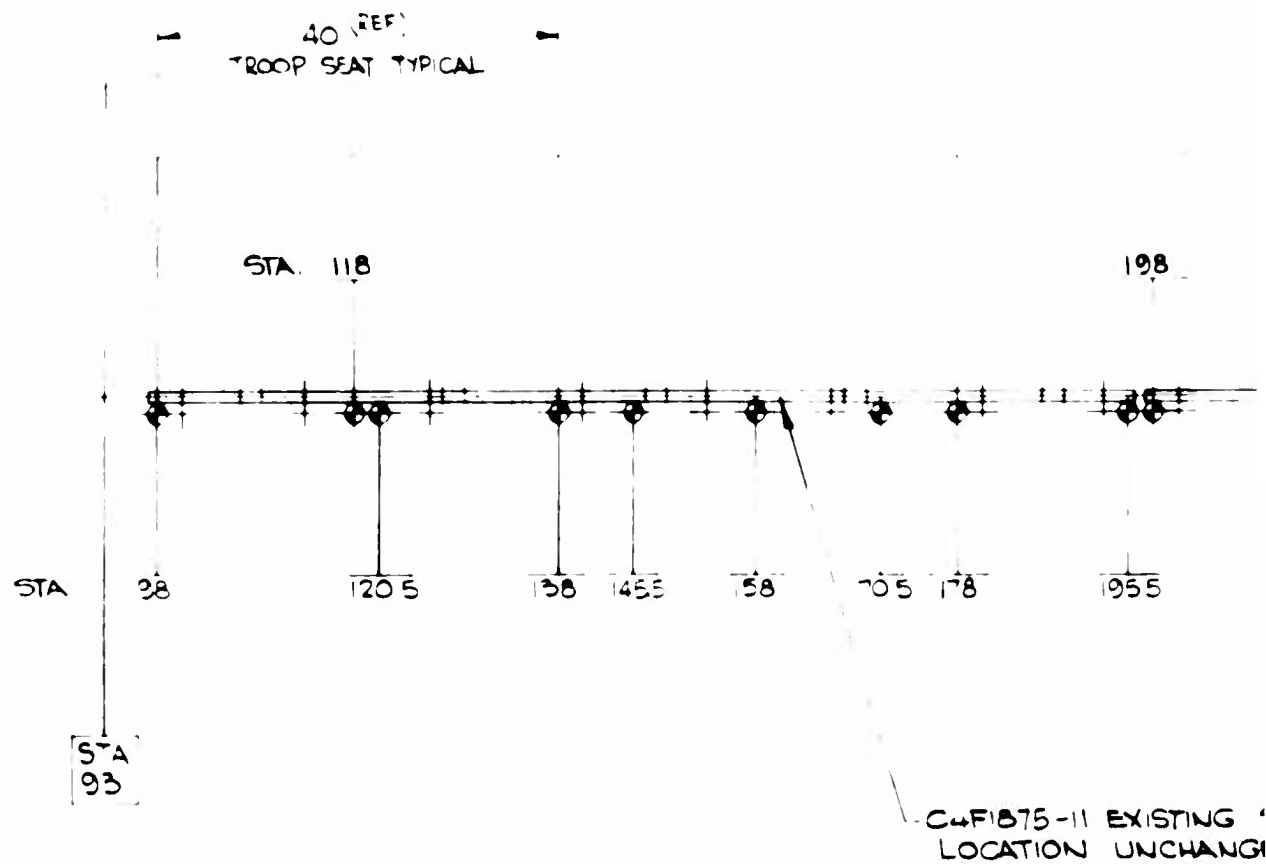
NOTE:




±.008  
845 DIA  
OD .065 WALL STD TUBE  
FINISH SATISFACTORY  
DIP AFTER MACHINE


D SPICE  
E AT APPROX STA  
B & R

# A



**DETAIL B**  
FULL SIZE  
INDICATED BY SYMBOL   
AND TYPICAL AT THE FOLLOWING STATIONS:-

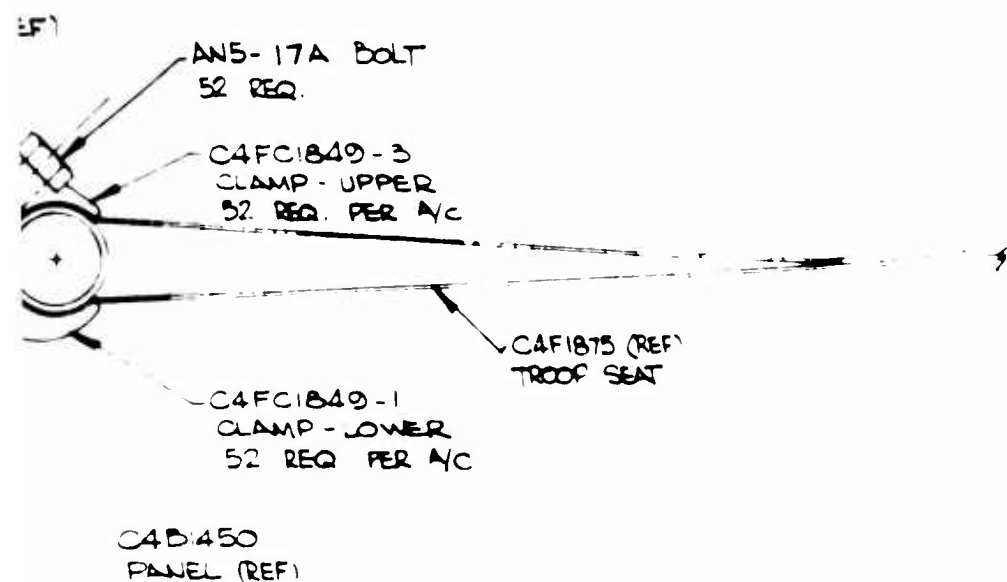
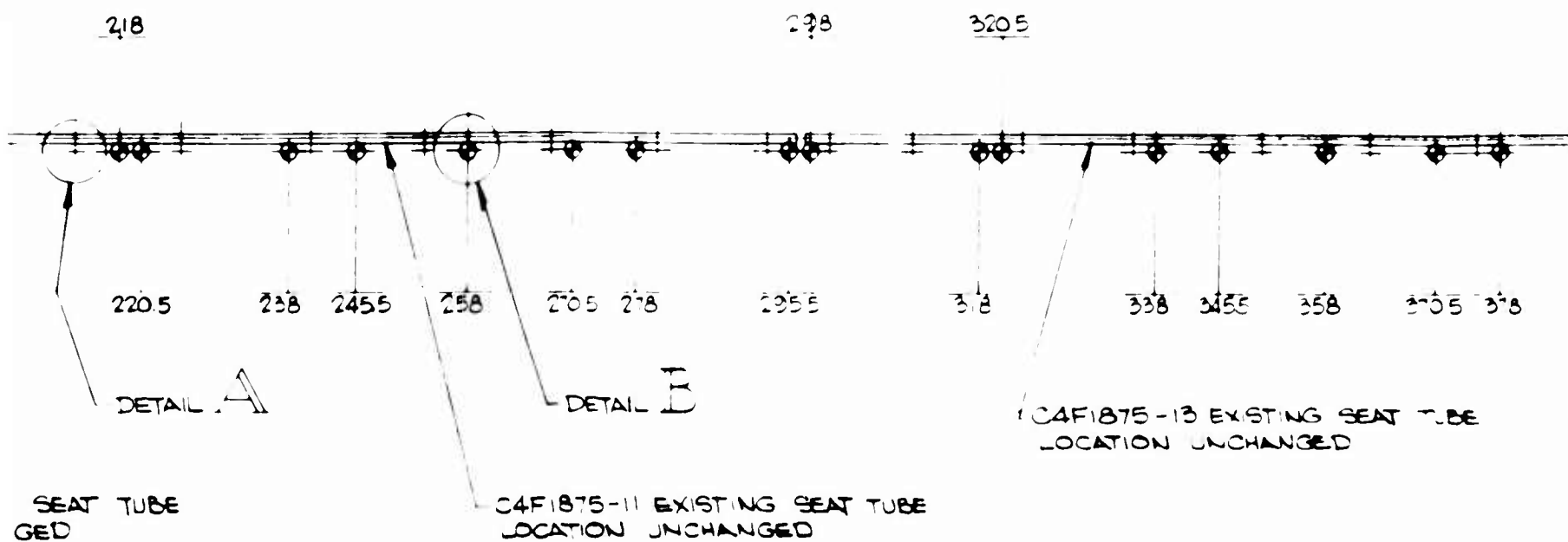
98	195.5	278	
118	198	293.5	370.5
120.5	218	298	378
138	220.5	318	395.5
145.5	238	320.5	398
158	245.5	338	415.5
170.5	258	345.5	
178	270.5	358	

**DETAIL A**  
FULL SIZE  
INDICATED BY SYMBOL   
AND TYPICAL AT THE FOLLOWING STATIONS:-

100.5	200.5	300.5	
113	213	310.5	
125.5	225.5	323	400.5
140.5	240.5	335.5	413
153	253	350.5	
165.5	268	363	
180.5	280.5	375.5	
193	293	388	

12 FORWARD

⊕ AIRCRAFT  
 ⊕ L H SIDE SHOWN  
 R H SIDE FUSELAGE STATIONS IDENTICAL



3. EXISTING WEIGHT REMOVED, PART NO C4FC1849-3  
 AND C4FC1849-1, 13 LBS + 6 PARTS = -0.78 LBS
- 2 PART NO C4FM1287-1 MODIFIED = -1.68 LBS
- 1 TOTAL EXISTING WEIGHT REMOVED = -2.46 LBS

NOTE:-

# B

⊕ AIRCRAFT

FORWARD

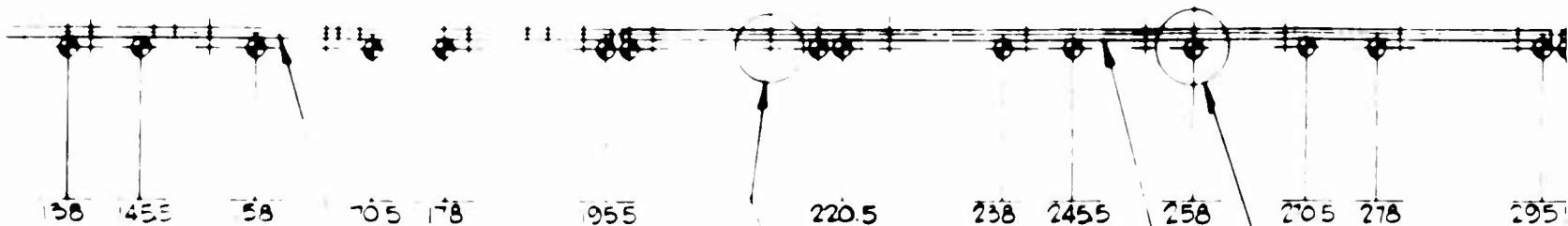
- H SIDE SHOWN

R H SIDE FUSELAGE ST

198

218

29



DETAIL A

DETAIL B

C4F1875-11 EXISTING SEAT TUBE  
LOCATION UNCHANGED

C4F1875-11 EXISTING SEAT TUBE  
LOCATION UNCHANGED

SAFETY BELT (REF)  
TYPE MC-1

FORMER  
SECTION (REF)

C4B1450-11-12 -  
RAIL SECTION (REF)

W.L. (REF)  
2459

(REF)

NAS697A5 ANCHOR NUT  
AN42GAD4 RIVET

AN5-17A BOLT  
52 REQ

C4FC1849-3  
CLAMP - UPPER  
52 REQ. PER A/C

C4FC1849-1  
CLAMP - LOWER  
52 REQ PER A/C

C4F1875 (REF)  
TROOP SEAT

C4B1450  
PANEL (REF)

DETAIL A

FULL SIZE  
INDICATED BY SYMBOL  
AND TYPICAL AT THE  
FOLLOWING STATIONS:

100.5	200.5	300.5	
113	213	310.5	
125.5	225.5	323	400.5
140.5	240.5	335.5	413
153	253	350.5	
165.5	268	363	
180.5	280.5	375.5	
193	293	388	

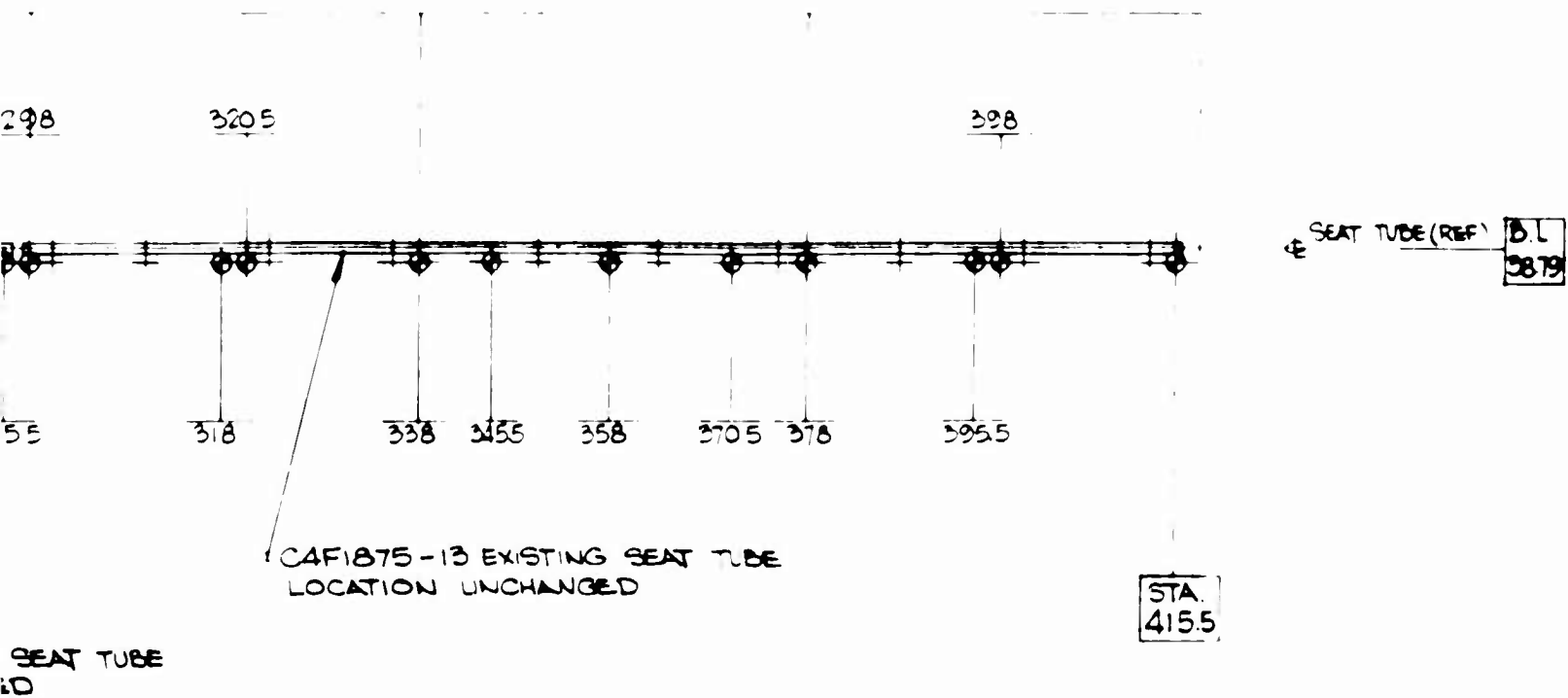
3.

2

1.

N

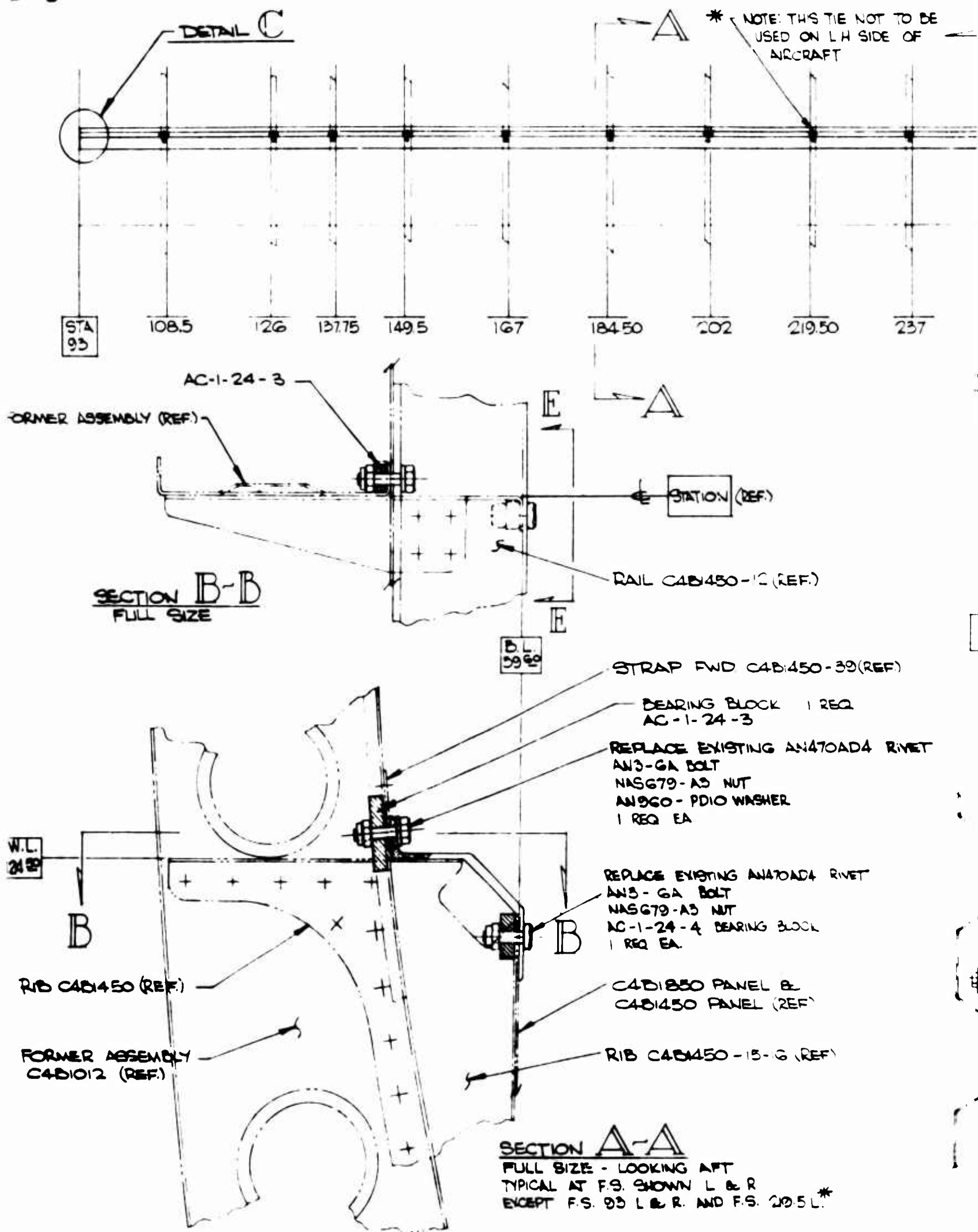
STATIONS IDENTICAL



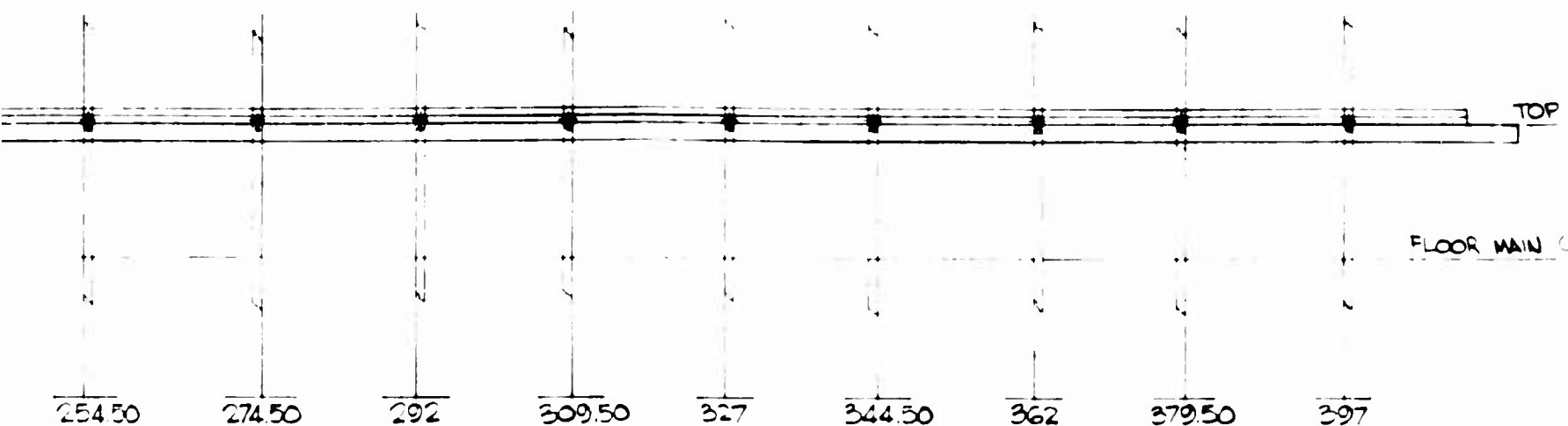
3. EXISTING WEIGHT REMOVED, PART NO. C4FC1849-3  
AND C4FC1849-1, .13 LBS \* 6 PARTS = -0.78 LBS.
2. PART NO. C4FM1287-1 MODIFIED = -1.68 LBS
1. TOTAL EXISTING WEIGHT REMOVED = -2.46 LBS

NOTE:-

# A



FORWARD

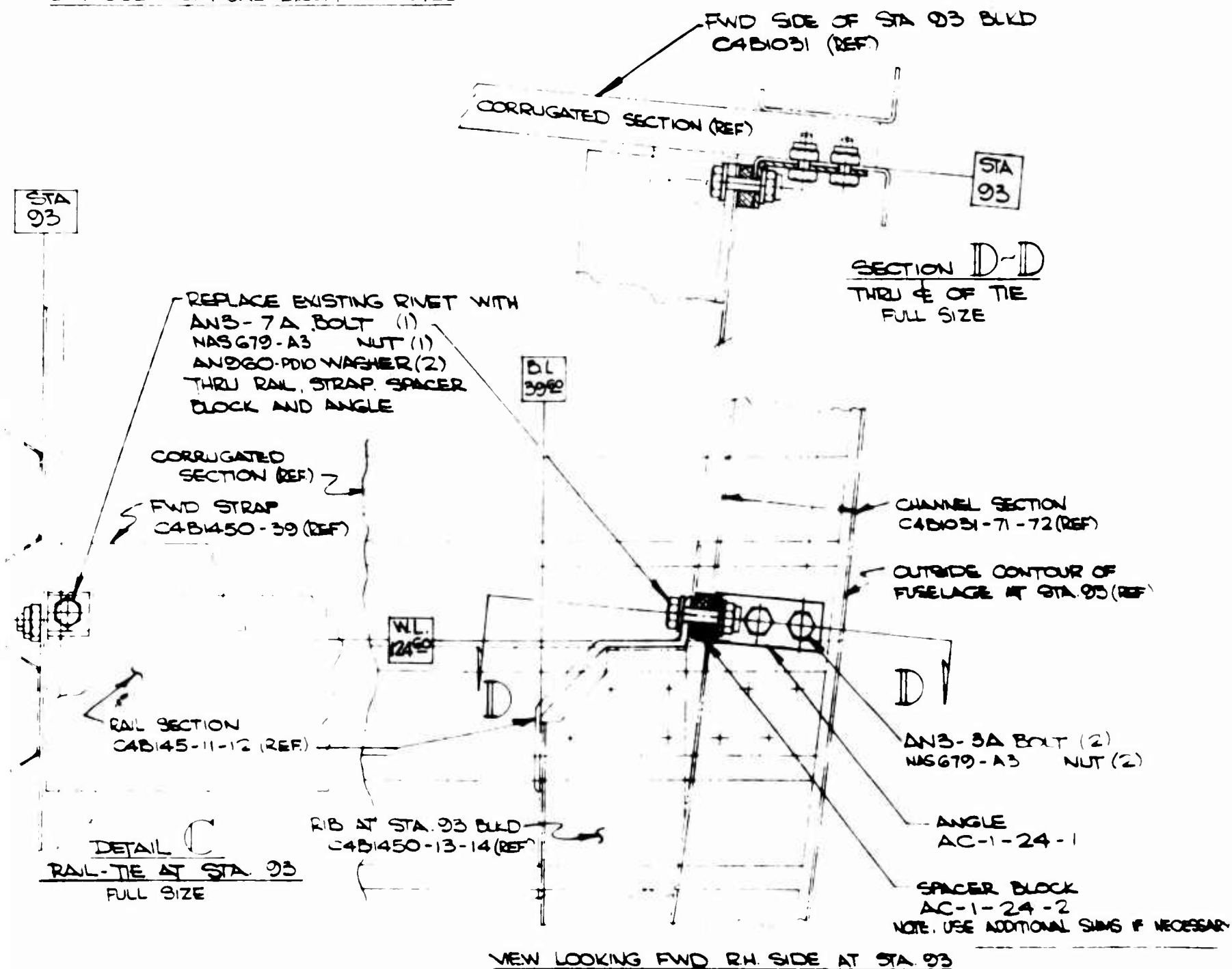


VIEW LOOKING OUTBOARD

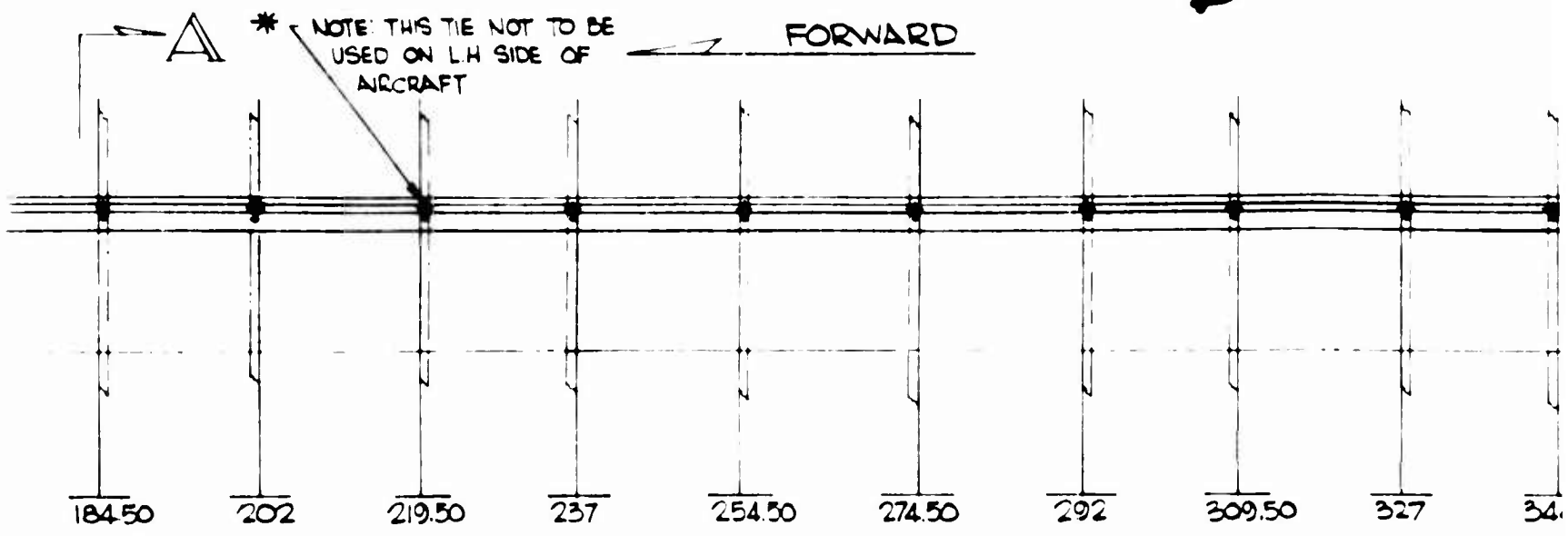
R. H. SIDE OF AIRCRAFT

SCALE: 1/10

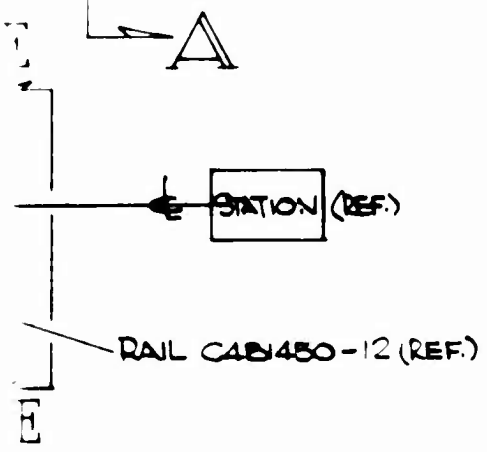
L. H. SIDE IDENTICAL EXCEPT AS NOTED \*



- B -

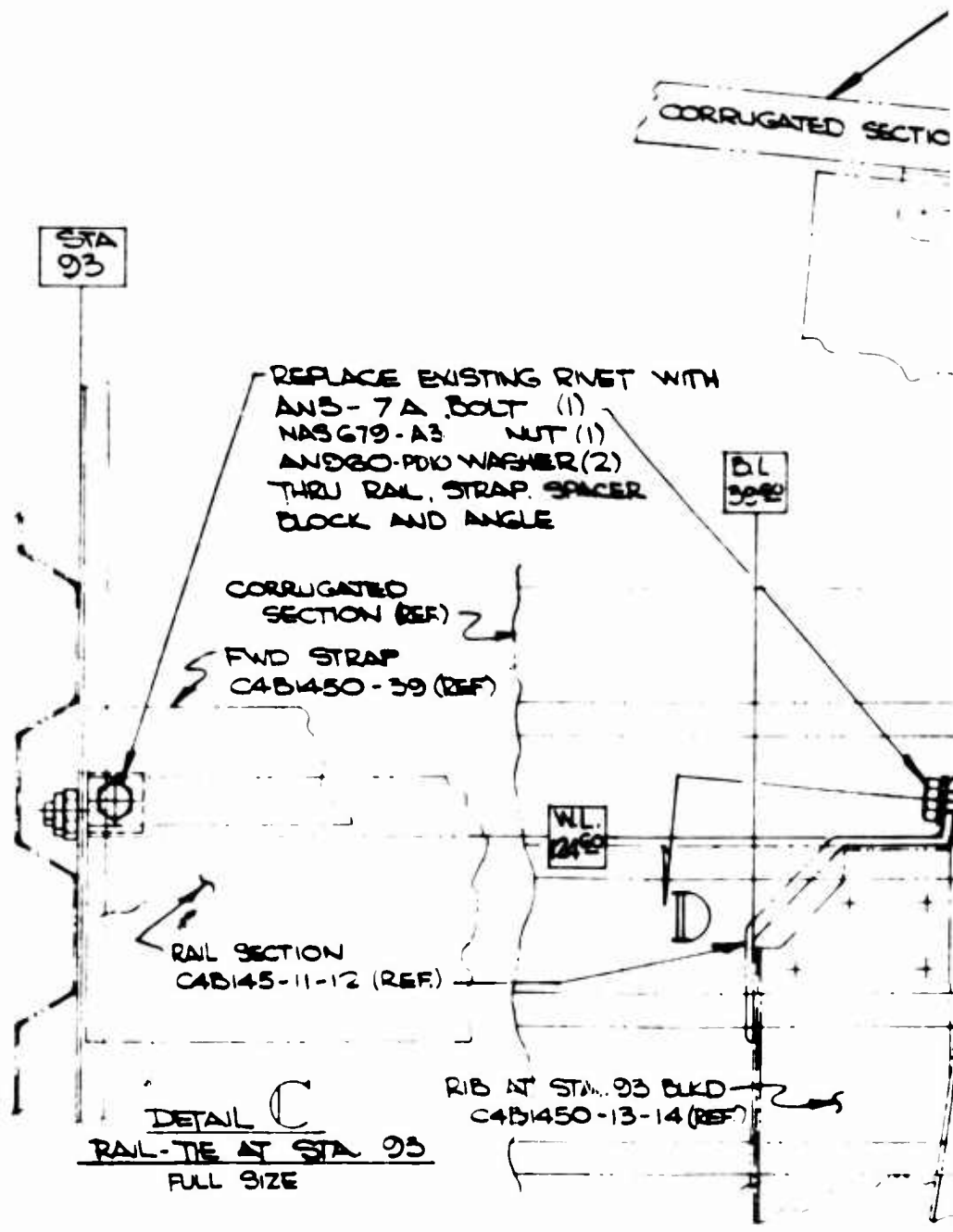


**VIEW LOOKING OUTBOARD**  
**R. H. SIDE OF AIRCRAFT**  
**SCALE: 1/10**  
**\* L.H. SIDE IDENTICAL EXCEPT AS NOTED**



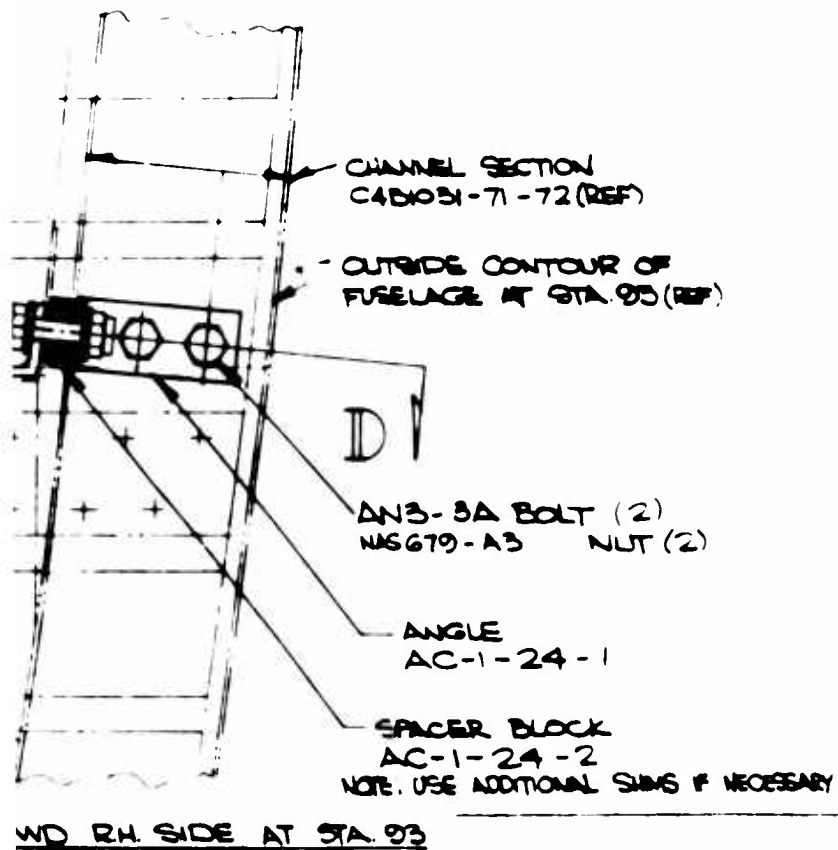
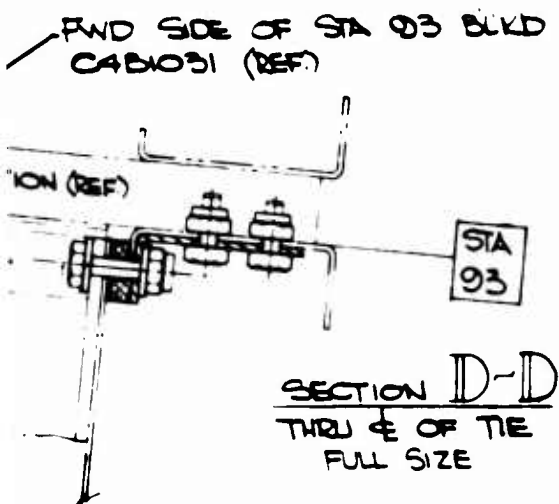
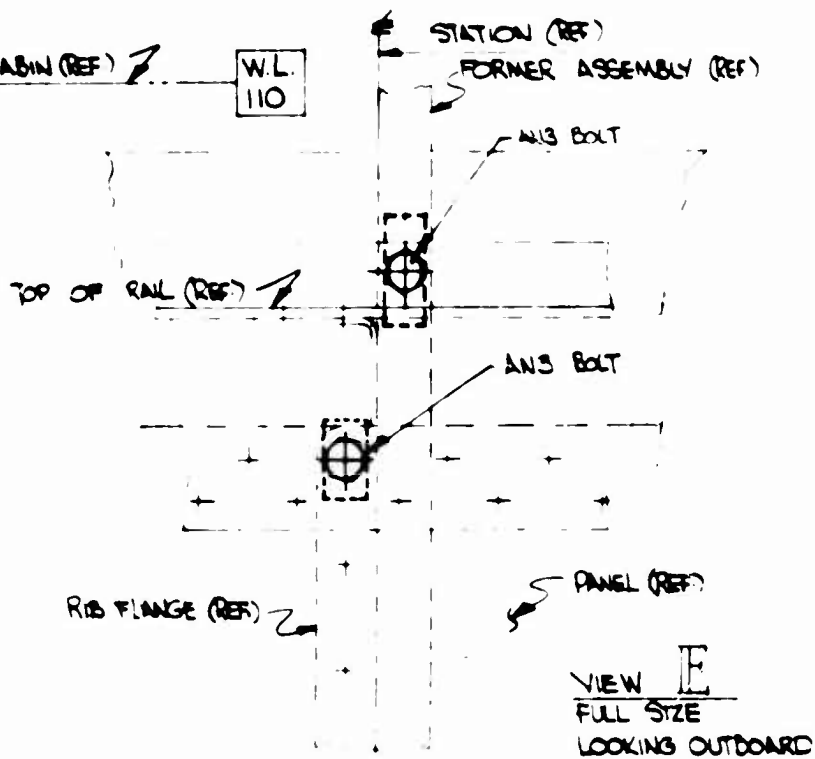
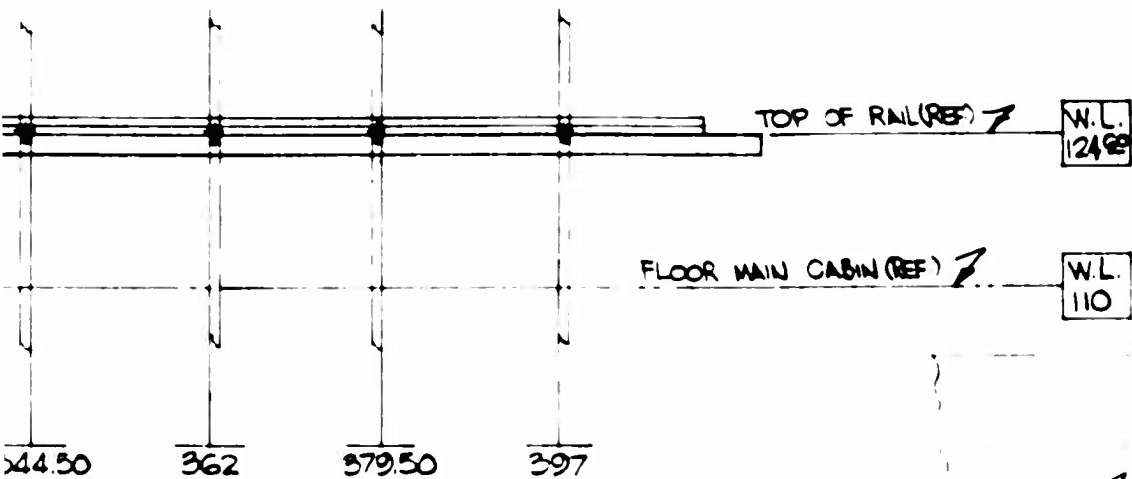
- STRAP FWD C4B1450-39 (REF.)
- BEARING BLOCK 1 REQ  
AC-1-24-3
- REPLACE EXISTING AN470AD4 RIVET  
AN3-GA BOLT  
NAS679-A3 NUT  
AN860-PD10 WASHER  
1 REQ EA.
- REPLACE EXISTING AN470AD4 RIVET  
AN3-GA BOLT  
NAS679-A3 NUT  
AC-1-24-4 BEARING BLOCK  
1 REQ EA.
- C4B1850 PANEL &  
C4B1450 PANEL (REF.)
- RIB C4B1450-13-16 (REF.)

**ON A-A**  
**SIZE - LOOKING AFT**  
**AT F.S. SHOWN L. & R**  
**F.S. 93 L. & R. AND F.S. 29.5 L.\***



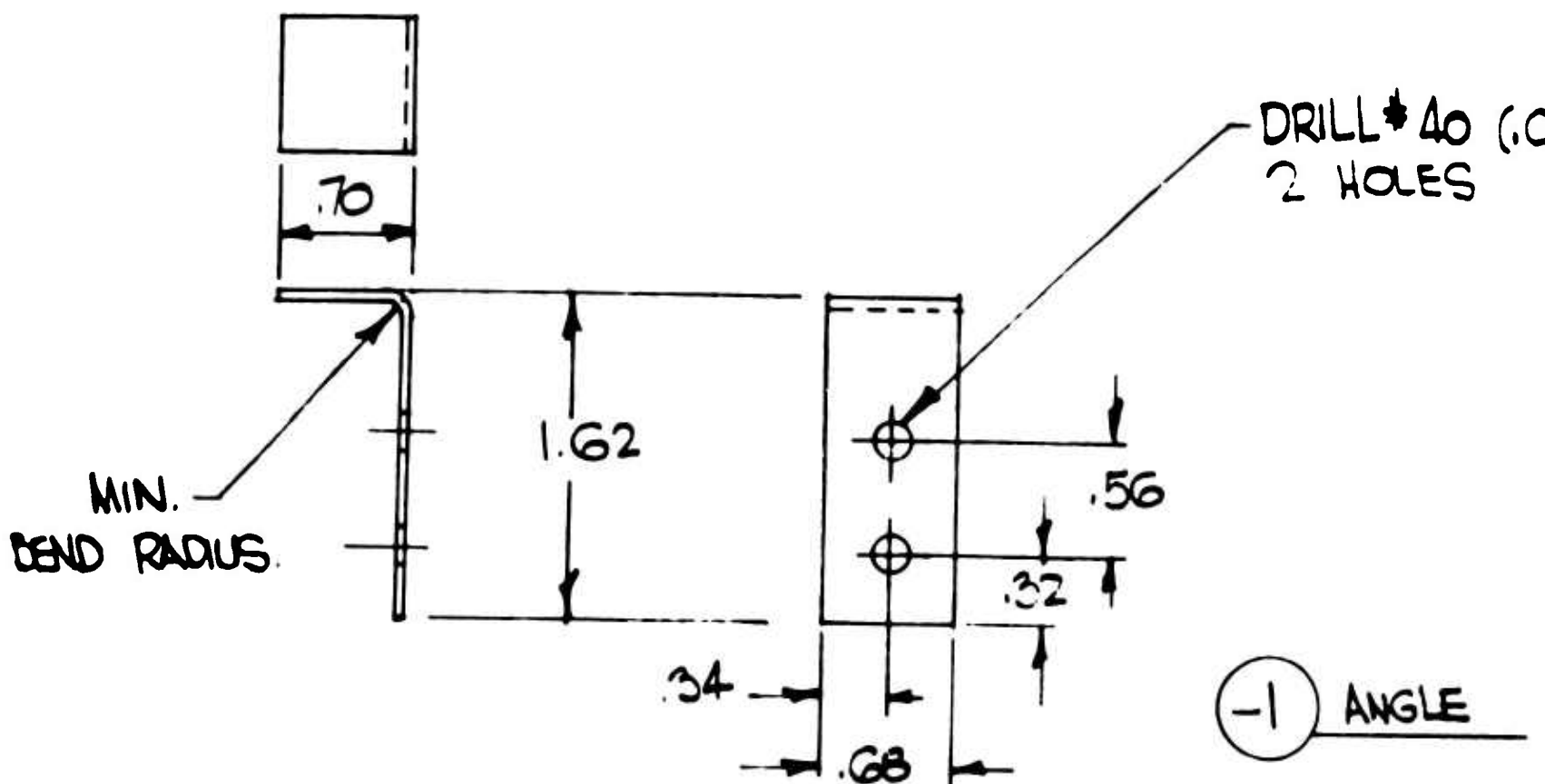
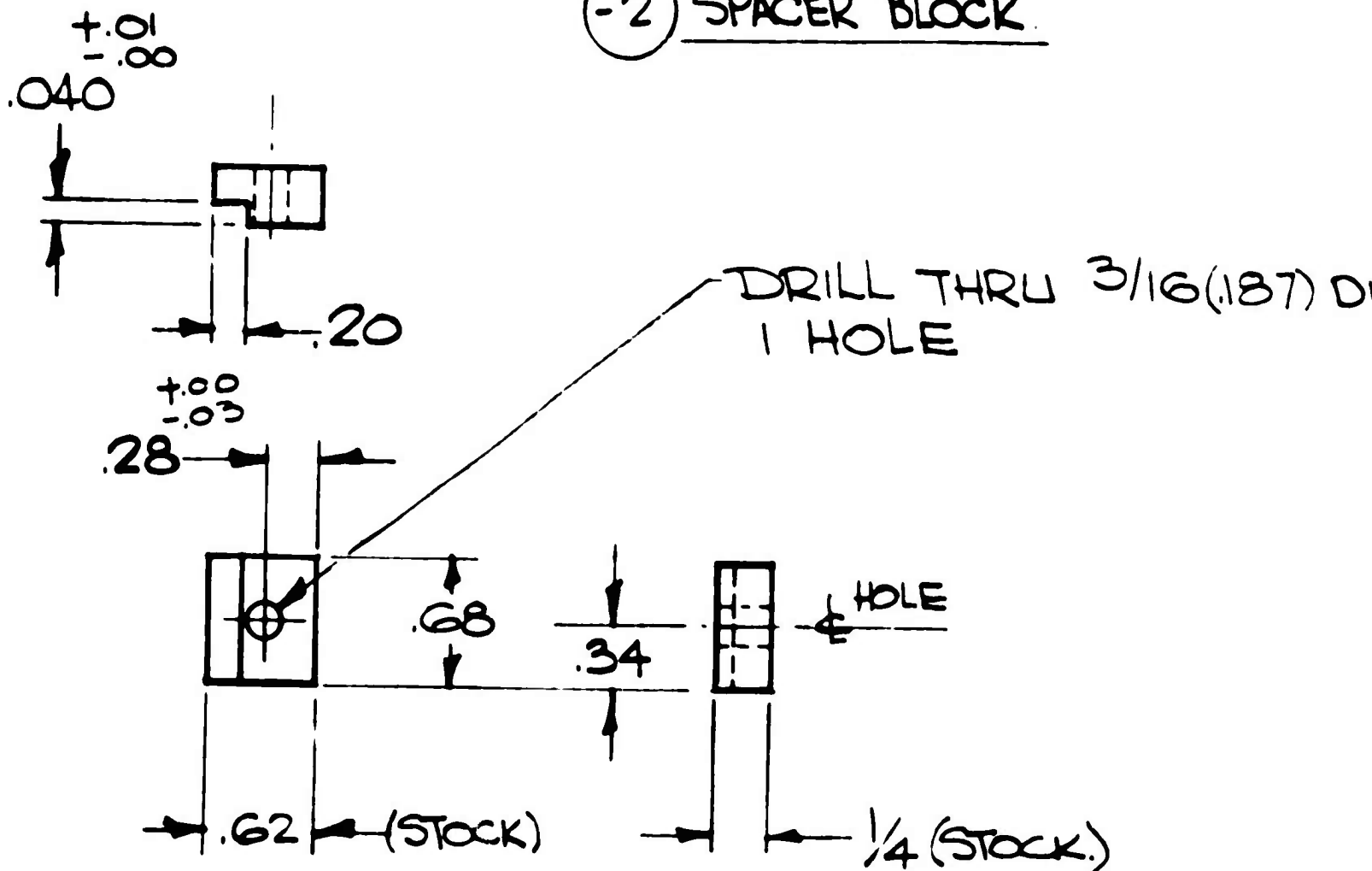
**DETAIL C**  
**RAIL-TIE AT STA 93**  
**FULL SIZE**



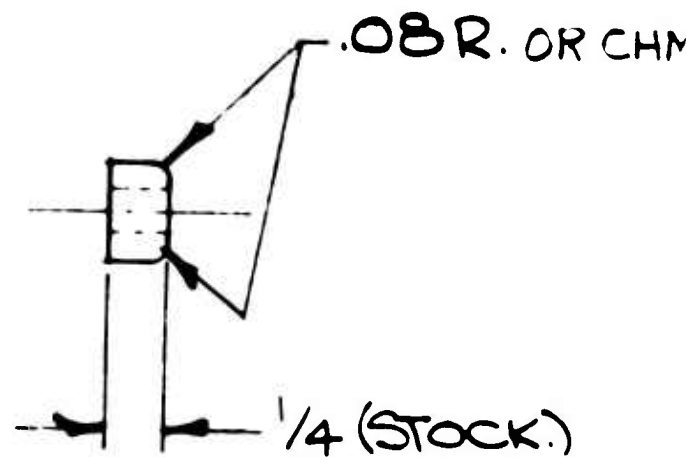
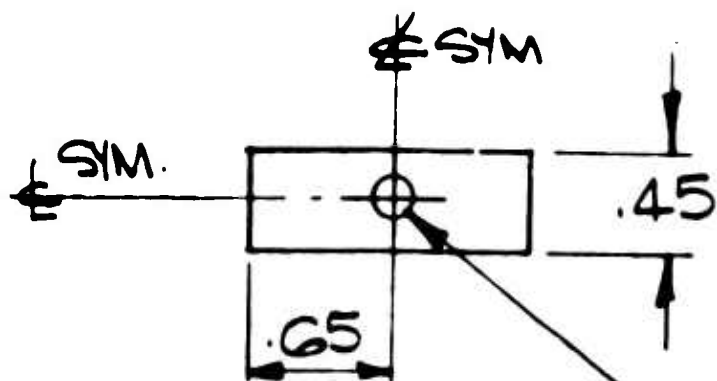


A

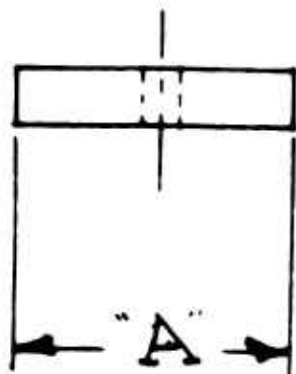
(-2) SPACER BLOCK



(-1) ANGLE



DIA.



DRILL THRU 3/16 (.187) DIA.  
1 HOLE

(-4) SAME AS -3 EXCEPT AS NOTED

(-3) BEARING BLOCK.

NOTES:

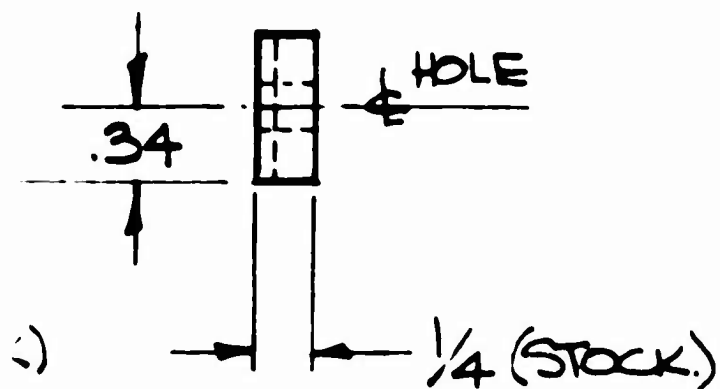
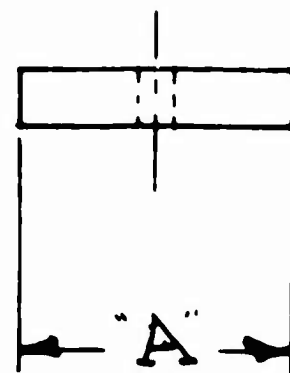
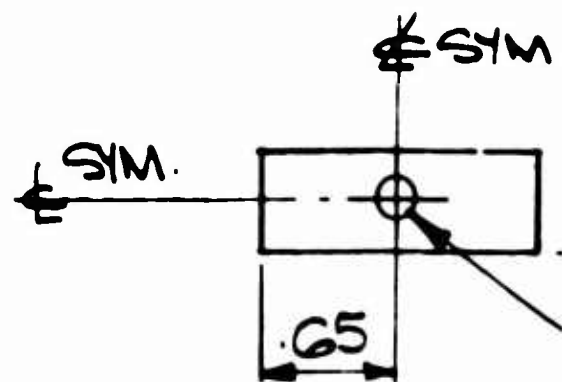
1. BREAK ALL SHARP EDGES ON FINISH  
BAR STOCK .02 RADIUS

098) DIA.

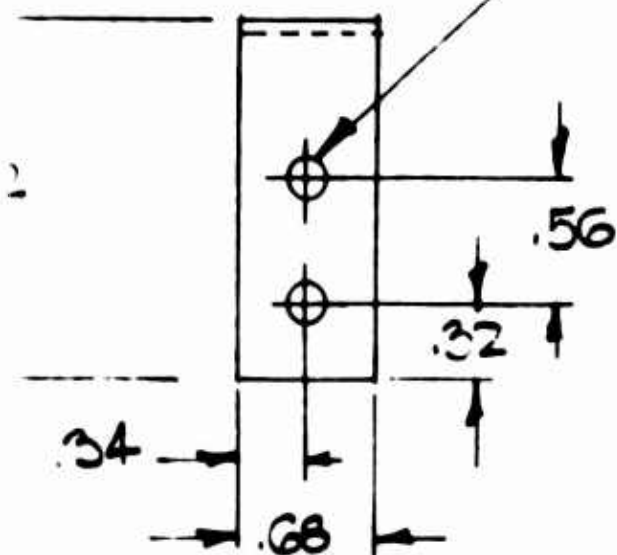
B

(-2) SPACER BLOCK

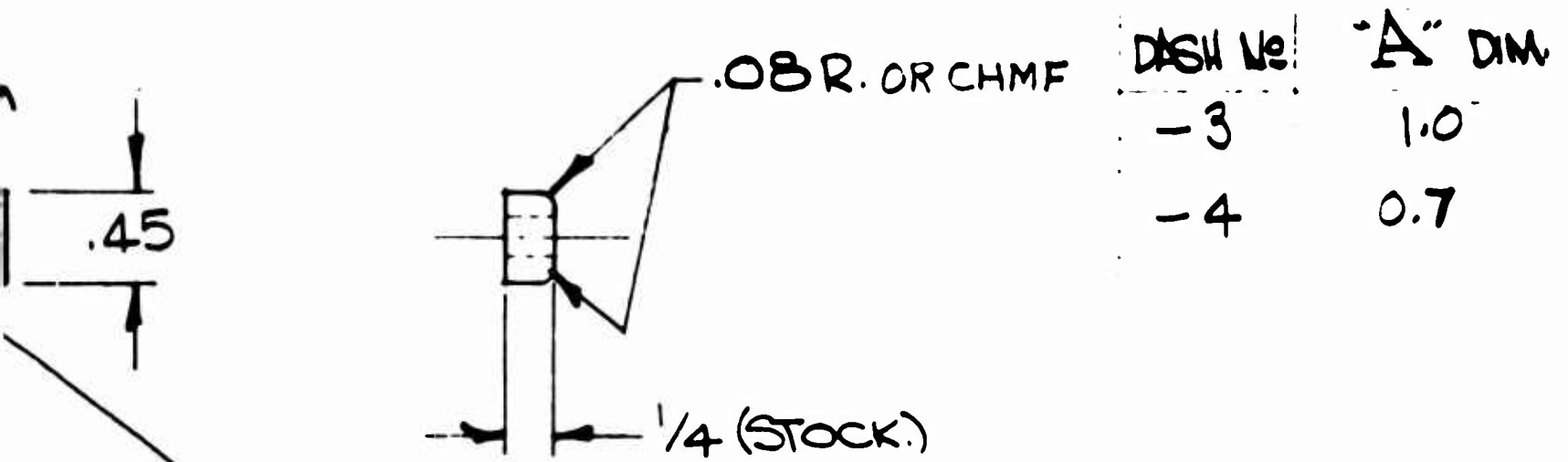
DRILL THRU  $3/16$  (.187) DIA.  
1 HOLE



DRILL #40 (.098) DIA.  
2 HOLES



(-1) ANGLE



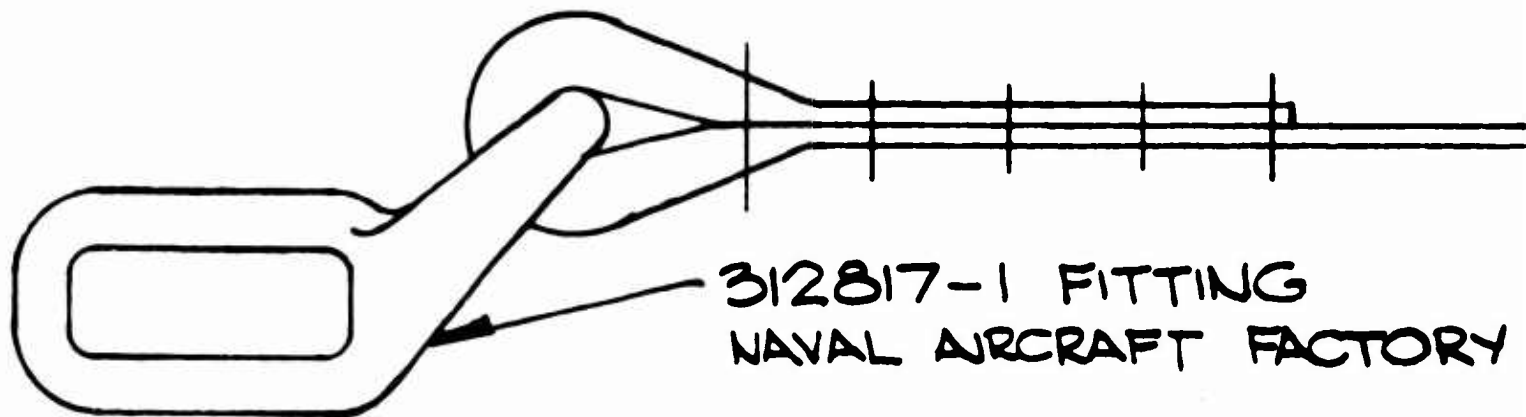
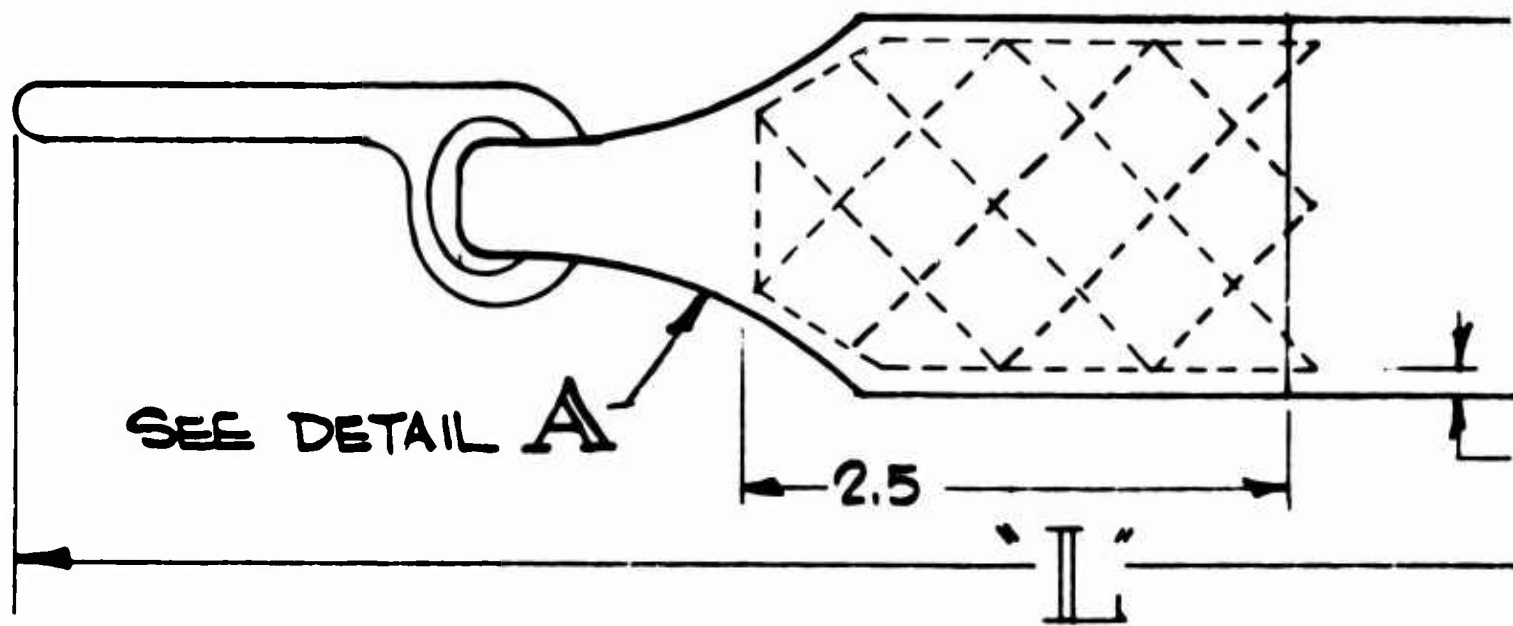
DRILL THRU 3/16 (.187) DIA.  
1 HOLE

(-4) SAME AS -3 EXCEPT AS NOTED.

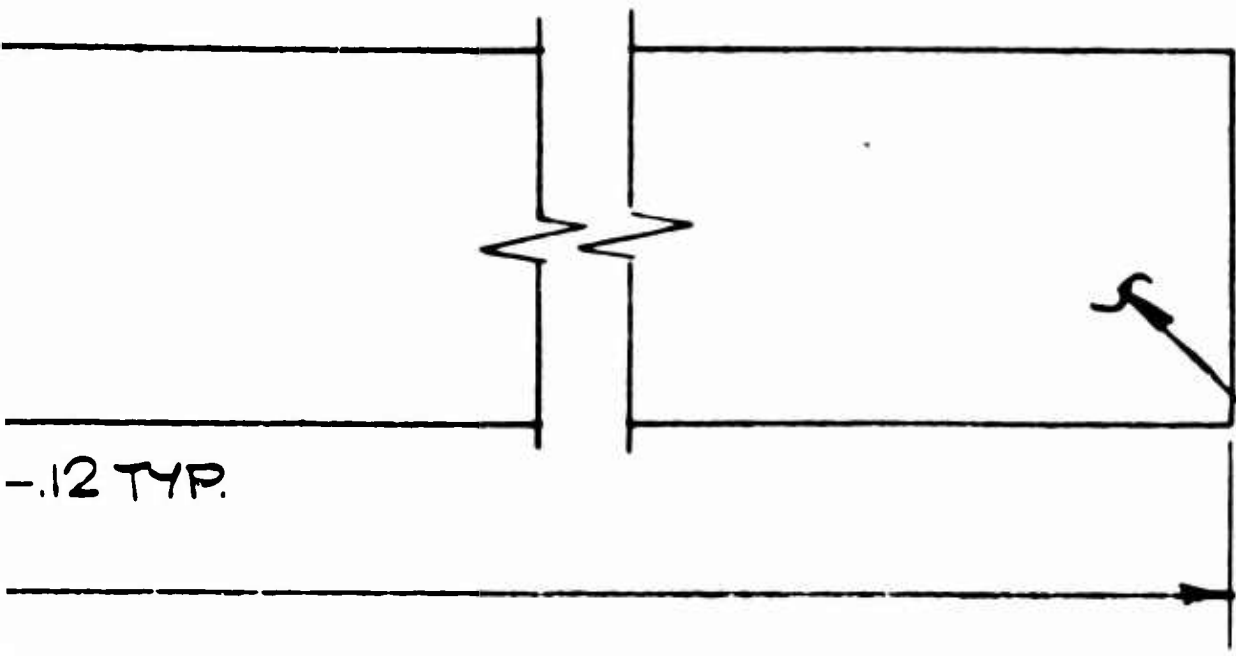
(-3) BEARING BLOCK.

NOTES: 1. BREAK ALL SHARP EDGES ON FINISHED  
BAR STOCK .02 RADIUS

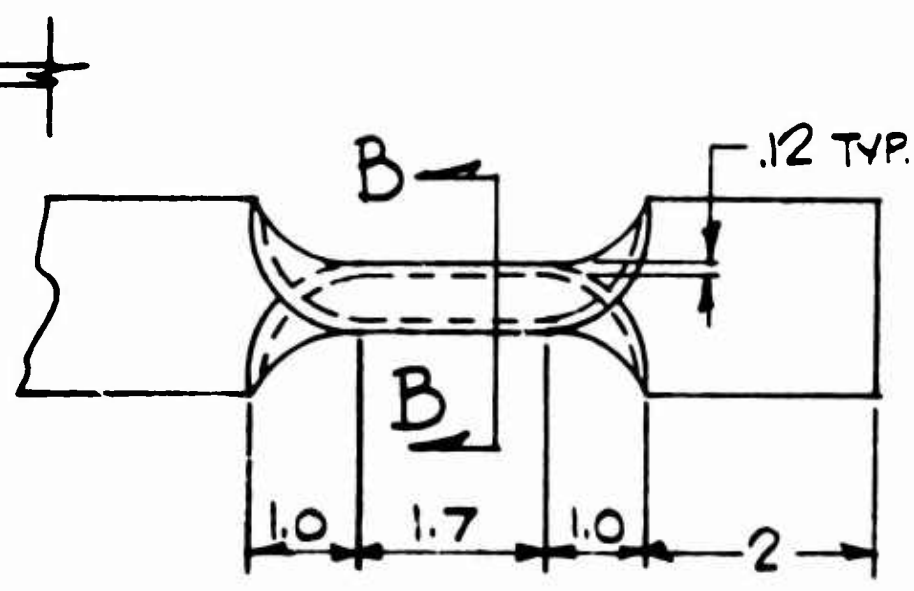
**A**



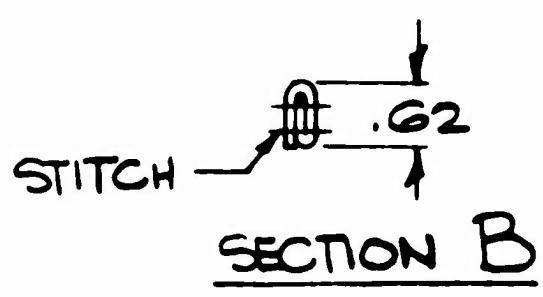
5. DACRON WEBBING TYPE II PER SPEC. MIL-W-25361  
.065 - .085 THICK X 1.72 WIDE MAX.  
WT. 2.10 OZ. /YD. MAX.
  4. STITCHING SHALL BE WITH NYLON CORD, MIL-T-7807  
NO. 3 SIZE TYPE I OR II, CLASS I, AND SHALL CON  
NOT LESS THAN 6 NOR MORE THAN 8 STITCHES PER  
IN ACCORDANCE WITH SPEC. DDD-S-751 TYPE 301
  3. ENDS OF STITCHING SHALL BE BACK STITCHED 0.5 IN. M
  2. SEAR ENDS OF ALL WEBBING TO PREVENT FRAYING
  1. STITCHING INDICATED BY DOTTED LINES - - - - -
- NOTES:



① WEBBING  
SEE NO

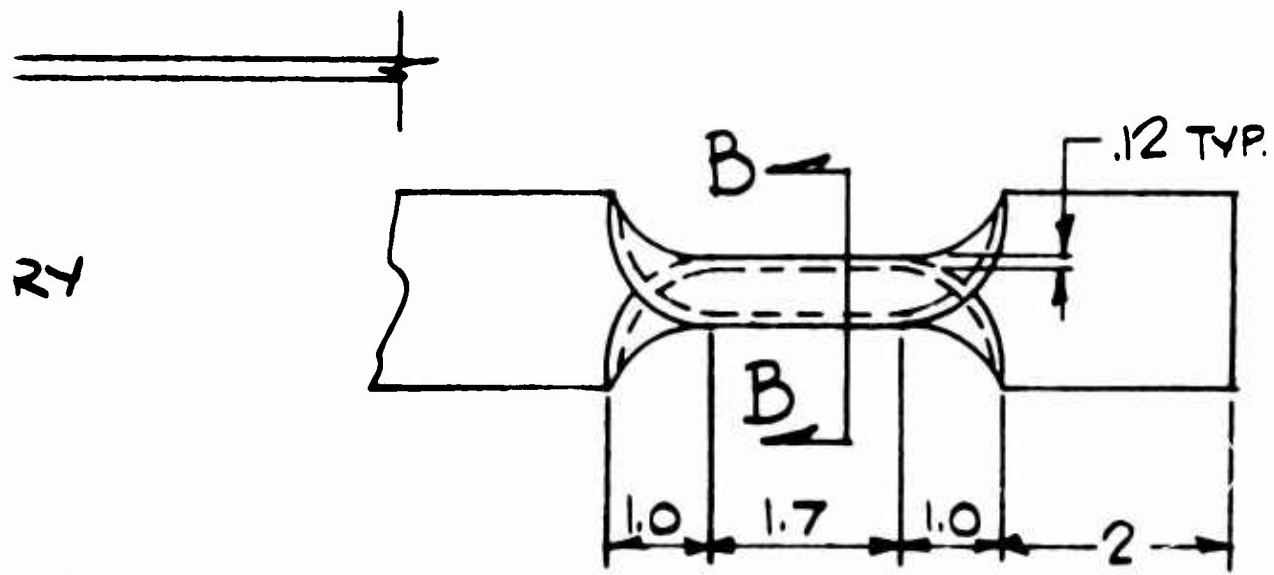
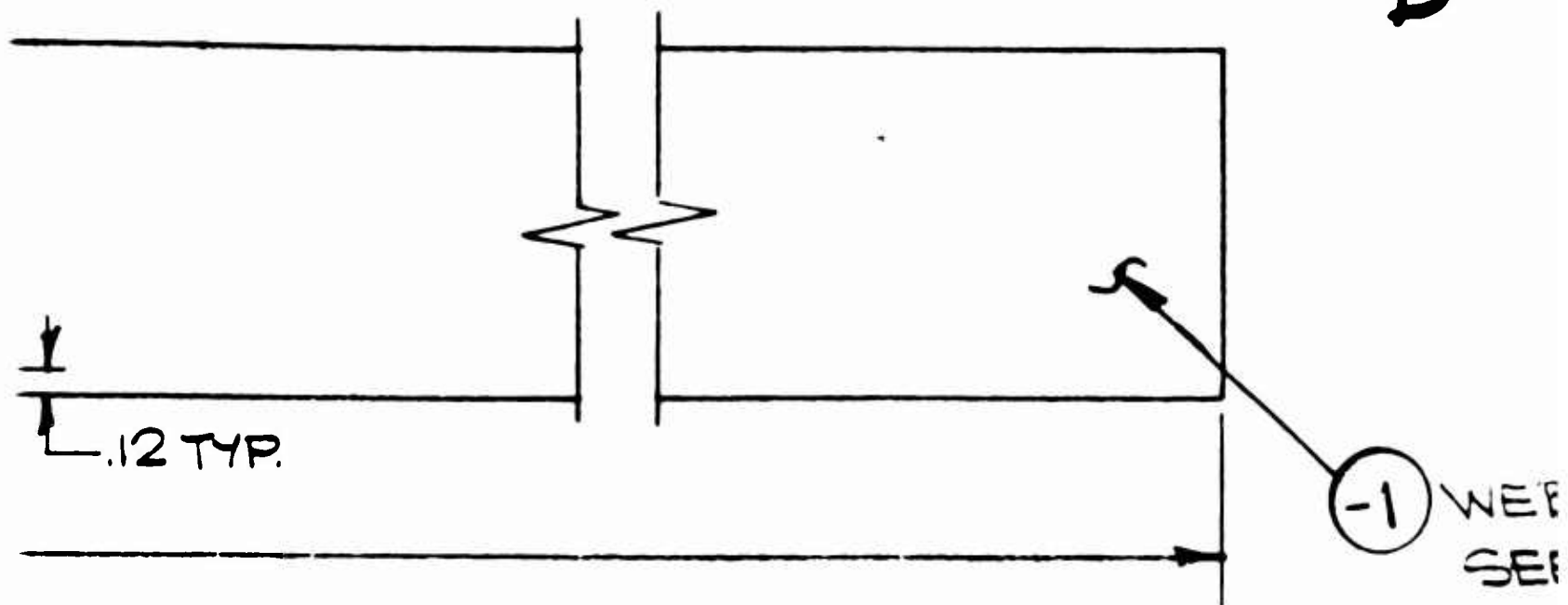


DETAIL A  
HALF SIZE



51  
7B  
INTAIN  
ER INCH  
MIN.

B

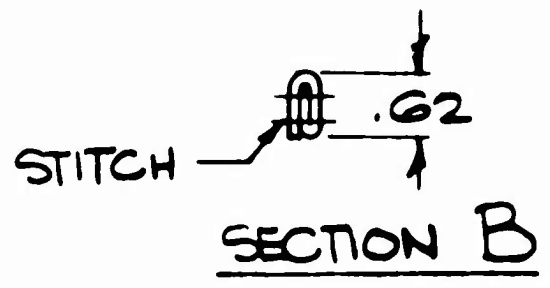


24

361

DETAIL A  
HALF SIZE

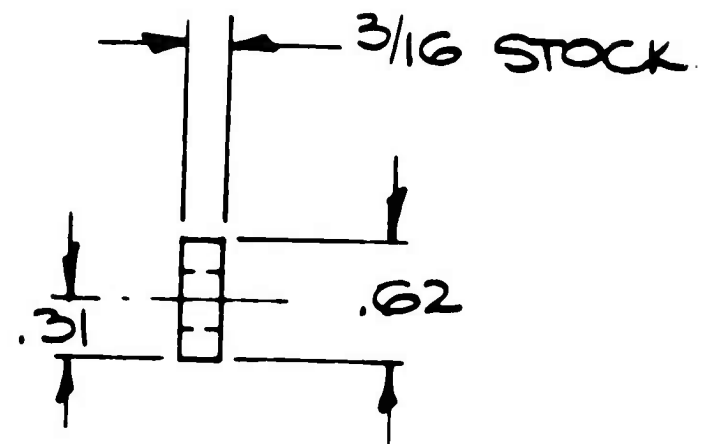
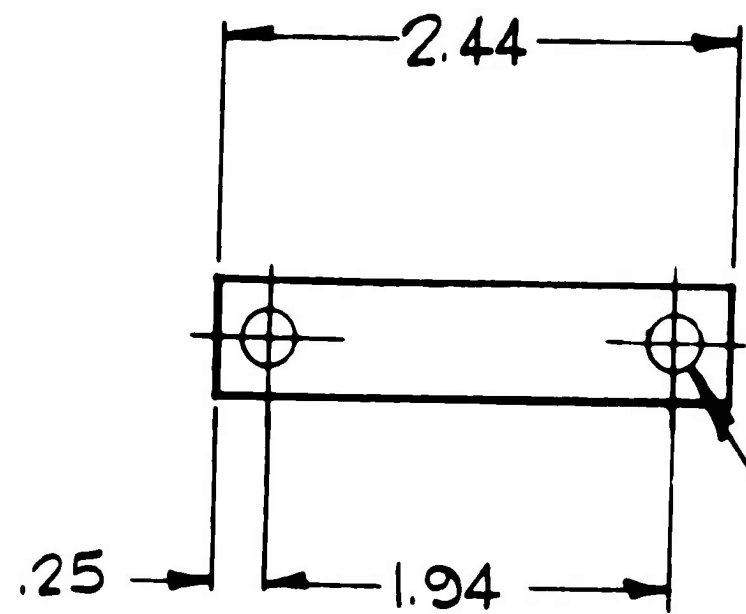
07B  
CONTAIN  
PER INCH  
DI  
MIN.





LENGTH OF STRAP		
AIRCRAFT	"L" DIM.	NEXT ASSEMBLY.
HC-1	18.1	HC-1-14
HU-1	16.5	HU-1-11
AC-1	20.8	AC-1-10

ABBING  
IE NOTE #3



DRILL THRU 3/16 DIA.  
2 HOLES

1. BREAK SHARP EDGES .02 R.  
NOTE:-